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ABSTRACT

Legislation and guidelines pertinent to children's play spaces in residential environments were gathered by means of an international inventory and a comparative study of 25 countries. Findings were directed toward those professionals who influence the development of legislation and guidelines for residential space use and design. The objective was to obtain as wide a response as possible from as many countries as possible. Respondents were selected through utilization of the resources of the International Playground Association, the Child in the City project (Canada), and officials from various institutes of higher education and public policy organizations. A questionnaire sent to respondents in the selected countries requested information on standards governing play space allocation, application and enforcement of guidelines, allocation of play spaces for different age groups, types of activities provided in residential developments, and jurisdictional differences between government bodies. Legislation from the 25 countries, as well as strategies and requirements for law enforcement are compared. This document is expected to help policy makers at different levels examine critically their country's current legislation and develop policies based on knowledge of successful programs in other countries. Appendices include the questionnaire, a summary of findings by country, and definitions of terms. (Author/DB)

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CHILDREN'S ENVIRONMENTS ADVISORY SERVICE

RESEARCH AND DEVELOPMENT PROGRAM

International Year of the Child 1979
L'Année internationale de l'enfant 1979

CMHC's participation in the International Year of the Child.

AN INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF LEGISLATION AND GUIDELINES FOR CHILDREN'S PLAY SPACES IN THE RESIDENTIAL ENVIRONMENT

Research Project 1

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AN INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF LEGISLATION AND GUIDELINES FOR CHILDREN'S PLAY SPACES IN THE RESIDENTIAL ENVIRONMENT

BY
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THIS STUDY HAS BEEN PREPARED FOR THE UNITED NATIONS COMMITTEE OF NON-GOVERNMENTAL ORGANIZATIONS FOR THE INTERNATIONAL YEAR OF THE CHILD, GENEVA, SWITZERLAND. THIS STUDY IS THE CANADIAN CONTRIBUTION TO THE NGO/IYC COMMITTEE WORKING GROUP: "CHILDREN AND THEIR SURROUNDINGS - PLAY AND RECREATION" COORDINATED BY THE INTERNATIONAL PLAYGROUND ASSOCIATION.

This project was supported by the Canada Mortgage and Housing Corporation as part of the research program undertaken by the Children's Environments Advisory Service for the International Year of the Child.

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OTTAWA, DECEMBER 1979

FOREWORD

The Children's Environments Advisory Service's Research and Development Program for the International Year of the Child has as its objective the advancement of good environmental planning and appropriate family housing design that supports the needs of children and youth (0-18).

An in-house CMHC IYC Committee, consisting of representatives of various CMHC divisions that impact on family housing and regional representatives, identified the gaps in the field. The committee selected projects of directed research to close these gaps and identify problem areas, to find solutions where possible, and to provide input to corporate policy and programs in the field of family housing. Five categories of investigation were selected to respond to these needs:

- Assembly/Production of Data

  To assemble a data bank on the condition of children in relation to their residential environment and to relate this data to data being collected by other departments and agencies.

- Evaluation

  To examine existing housing situations catering to the needs of families with children at home.

- Design and Awareness Material

  To develop proposals for improving housing and the surrounding environment through design.

- Demonstration

  To construct demonstration facilities for children, or to introduce improved facilities for children in on-going projects.

- Development of Policy Proposals

  To review the condition of children in Canada, and present proposals to meet or correct emerging problems in relation to housing.

The CMHC IYC Committee will develop for CMHC Management a policy paper based on the facts, figures and findings of the Research and Development Program for IYC, with implications for future policy, programs and research affecting family housing.

The Children's Environments Advisory Service plans to use the focus on children made possible by the Year of the Child to plan new directions for our service. We intend to conduct further research, provide additional resources and sustain the momentum of our advocacy role within CMHC.

This project is one of 21 projects (titles on last page) in the Research and Development Program for the International Year of the Child. These reports are distributed by the Children's Environments Advisory Service.

Satya Brink

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The International Year of the Child has provided the context for undertaking this project. The study has been included in the IYC programs of the International Playground Association, Canada Mortgage and Housing Corporation and the UNESCO sponsored Man and His Biosphere Symposium entitled "Managing Urban Spaces in the Interest of Children". In addition to the contribution made by individual members of the above groups I would particularly like to thank Polly Hill, Adviser of the Children's Environment Advisory Service and President of the International Playground Association for her long-term involvement and advocacy for children's right to play, and for her support and encouragement throughout this project.

I would also like to acknowledge and thank Satya Brink of the CEAS for her thorough attention and help throughout the study. In addition, I would like to thank Julio César Inostroza, my colleagues and the secretaries of the faculty of education at the Université du Québec, Hull, Québec for their support and contribution to the project. The support of the Direction des études et de la récherche, Université du Québec, Hull, Québec has been most encouraging and I particularly thank M. Marc-Aurèle Vincent, Résponsable, Bureau de la récherche for his assistance in obtaining the necessary support. I would also like to thank Doren L. Madey, NTS Research Corporation, North Carolina for the critical review and help in establishing future dissemination strategies for this report.

The individuals and the government agencies from whom the data were collected and the experts who shared their time and knowledge are also thanked; without their cooperation, their thoroughness and their attention, this study could not have been completed.

Finally, I would like to thank my family and friends for their support and understanding during this intense year and the preceeding years of research. Thank you Anna, Johan and Cattis for your patience and understanding of my preoccupation with this monumental task.

PREFACE

The International Playground Association is very concerned with current dehumanized trends such as the large scale of settlements, the inappropriate housing forms for family life such as highrise, and the inadequate environmental planning and poor traffic management.

Allocation of play spaces through public policies such as legislation, or advisory documents is one of the tools society has to combat haphazard planning that reflects an indifference to children's needs.

Regulations can safeguard space for the future, they can prevent or correct the erosions of the past which have resulted in inadequate recreation space for children's play and particularly in the area near their homes.

The study provides data base as well as alternative models for municipalities and national regulatory agencies which are in the process of developing land use and site planning criteria for housing developments.

As Dr. Esbensen points out this study does not attempt to measure the quality of the play space or facilities required by the regulations. However, certain elements of quality emerge when one reads the responses from each country found in the report.

A further study to measure the relationship of the quantitative regulations, and the elusive aspects of the quality of the play environment is suggested from this study.

Play spaces can be bare or, uninviting - poorly equipped or even hazardous for children. Space can also be fascinating to children full of variation and adventure. Providing a play environment that will stimulate the child's physical, social, intellectual, emotional and creative development should be our ultimate goal.

This study provides the basis (can sharpen our tools) for action. Action that will provide all children with what only some children have, and always within the context of their country, climate and culture and always with the aim of merging the quantity of space with quality of opportunities for childrens' play.

Polly Hill
President, International Playground Association

THE INTERNATIONAL YEAR OF THE CHILD

The International Year of the Child, 1979, is a call to all nations of the world to give renewed focus to their own children's needs. It is a year in which to expand efforts at the national and community levels to provide lasting improvements for the well-being of children and to provide a framework for advocacy on behalf of children and for enhancing the awareness of the special needs of children on the part of decision makers and the public.

RELEVANT PRINCIPLES OF THE UNITED NATIONS DECLARATION OF THE RIGHTS OF THE CHILD, 20 NOVEMBER 1959

Principle 2

The child shall enjoy special protection, and shall be given opportunities and facilities by law and by other means to enable him to develop physically, mentally, morally, spiritually and socially in healthy and normal manners and in conditions of freedom and dignity. In the enactment of laws for this purpose the best interest of the child shall be the paramount consideration.

Principle 7, paragraph 3

The child shall have full opportunity for play and recreation which should be directed to the same purpose as education; society and the public authorities shall endeavour to promote the enjoyment of this right.

Emphasis added.

ABSTRACT

AN INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF LEGISLATION AND GUIDELINES FOR CHILDREN'S PLAY SPACES IN THE RESIDENTIAL ENVIRONMENT

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Children play everywhere. The quality of their residential environment as a place to play is dependent upon the land development practices established by different levels of government. Rapid urban population increases throughout the world have caused spiraling cost and scarcity of urban land. The twentieth century urbanization and industralization have increasingly encroached upon the spaces for leisure and play activities, thus affecting the opportunities available for children to play.

Legislation and guidelines for children's play spaces in the residential developments differ throughout the world. This study reports the findings of an international inventory and comparative study children's play space requirements in thirty-eight countries. Legislation for twenty-five countries, requirements converted to comparable terms, comparison of requirements and strategies for application and enforcement of laws and policies regarding the allocation of play spaces for children are described. Policy makers at different levels and in different countries should be able to develop appropriate policies based on experience and knowledge of what is being done successfully elsewhere in the world.

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1. INTRODUCTION

1.1 Purpose of the study

The purpose of the study is to conduct an international inventory and comparative study of legislation and guidelines for children's play spaces in residential developments in thirty-eight countries. The findings of the study will be analysed and directed towards professionals in government agencies and private organizations whose decisions influence the development of legislation and guidelines for residential space use and design. This document contains legislation for twenty-five countries, requirements converted to comparable terms, comparison of requirements and strategies for application and enforcement of laws and policies regarding the allocation of space for children. The data in this document should enable policy makers at different levels and in different countries to critically examine their own existing legislation or to develop appropriate policies based on experience and knowledge of what is being done successfully elsewhere in the world.

1.2 Problem

During the twentieth century, urbanization has increasingly encroached upon the spaces for leisure and play activities, thus affecting the opportunities available for children to play throughout the world. Many countries have developed public policies to deal with the availability of play spaces for children in the future. "Planning for children's play is considerably more than just putting playgrounds into completed housing developments. Planning for play is in itself town and country planning" (Bengtsson, 1974). The extent to which this distinction between playgrounds and play opportunities is made varies considerably throughout the world. Legislation, planning policies and guidelines for children's play spaces have been developed to different degrees to deal with this distinction. This comparative study and analysis of space requirements for children's play opportunities in the residential environment has been undertaken to enable us to benefit from the experiences of other nations.

1.3 Scope of the study

This study is clearly related to the more complex problem of land use and development of residential environments. Practices in land allocation for residential developments vary throughout the world. For example the units of measure used in some countries consist of land covered by buildings related to site area, or building floor area related to free space of site area. Units of measure for determining land allocation for play spaces is based on a variety of different criteria such as total population per

hectare, unit count, or bedroom count. This necessitates developing a conversion model in order to compare the requirements for children's play spaces from one country to another. This study focuses on open space recreational or amenity areas made available to child residents of typical residential developments throughout the world.

Throughout the world urban population increases have caused spiraling cost and scarcity of urban land which has forced nations to establish measurable criteria of the distribution of open spaces, amenity and other communal facilities. With the aid of standardized units or measure referring to a dwelling unit or a room unit, space requirements can be developed for the variety of user needs in residential developments. In practice the measure of land use has been primarily employed for the purpose of comparison between space requirements for different functions as a tool to create a balance in comprehensively planned housing.

The units of measure are most often established quantitatively in standards or guideline documents. Such quantitative measures, when applied to the allocation of residential amenity areas are linked to the qualitative requirements.

1.4 Definition of play spaces for this study

The objective of this study is to focus on the open space recreational or amenity areas made available to child residents of typical residential developments as indicated through available standards or guidelines and legislation of different countries. In many instances these areas have commonly been defined as children's play grounds. In this study, however, the term play space is used to articulate and describe areas to which children of different age groups can have ready access to play. Primary focus is on the outdoor play spaces although some countries allow for trade offs for indoor play spaces. In the clarification of "ready access" it is important to note that such access is related to proximity to the homes of children. Thus play spaces for preschoolers, and school age children are to be provided within the residential complex. Such spaces are geared principally for use by inhabitants of the particular residential family housing project or small residential neighbourhoods.

In traditional terms spaces for play have been provided through the development of play grounds. Herein the opportunities for children's play is understood to be provided for in a variety of spaces. The term "play spaces" as used in this study encompasses the variety of spaces which can be used by children as play environments. This

includes clusters of trees, bushes, hills, ponds naturally preserved and other natural landscaping features as well as play grounds.

Regional parks and large sport facilities are usually provided for through different public policies. While Parks and Recreation Departments of Regional and Municipal Governments may set aside land as play parks for children, this study is limited to the legislation governing housing related play spaces. These are spaces which the developer builder, in fact must set aside and develop within the site as a coherent part of the housing project or residential redevelopment.

2. METHODOLOGY

This study is an inventory of the public policies governing play space opportunities developed through legislation or recommendations of governing bodies at different levels of government in different countries. This inventory provided the data to undertake a comparative analysis of the way different countries deal with the allocation of play spaces for children in the residential environment.

2.1 Definition of terms

An international inventory of this magnitude necessitates a clear definition of terms which will facilitate consistency and understanding. As terminology varies between countries the following terms are used in this study for consistency.

- Play space requirement. As defined for this study, play spaces are a variety of spaces both developed and preserved within a residential environment, exclusively for the use of children.

- Standards: Mandatory requirements applied through legislation by a particular level of government.

- Guidelines: Advisory policies which suggest the application of certain requirements. These are purely recommendations and are not enforceable or mandatory.

- Residential Development: A housing project providing shelter for families with children. This definition includes new, old, rehabilitation and low to high density forms of housing.

2.2 Information and data required

In order to undertake this study it is imperative to know what questions to ask, and how to accommodate for the variety of responses possible. The questions are key to collecting the appropriate data and the selection of respondents is equally important. To carry out the objectives of the study it was determined that the following data was required:

- specific requirement for indoor and outdoor spaces

  - standards - quantitative
  - guidelines - qualitative

. level of government responsible for enacting and enforcing the requirement.

. level of enforcement throughout the country.

. limitations to policies.

. financial support for implementation.

. examples of application of policy requirements to hypothetical residential developments.

2.3 Questionnaire development

The questionnaire development consisted of an initial stage of preliminary questions wherein the necessary data was sought. Subsequent to the field test of the preliminary questionnaire it was revised, reviewed and the final version sent out to the selected sample.

The final questionnaire was specifically designed to focus on requirements or guidelines for children's play spaces close to the home living environment. The questionnaire attempts to avoid the miscalculation which can occur when looking at different leisure time play space opportunities in different countries. The allocation of children's play spaces in residential developments as defined for this study was clearly described in the introduction so that space allocated for parks or other facilities would not result in inflated values.

The questionnaire was reviewed by Dr. Satya Brink, Children's Environments Advisory Service, CMHC, Mr. Grant Peart, City of Ottawa Planning Dept., Dr. J. Inostroza, Université du Québec, Madame Thérèse Aquin, CMHC, Mr. Nic Nilsson, Vice-president, IPA Stockholm, Sweden, Dr. Herman Zinn, W. Germany and Dr. Motoaki Hagiwara, Gumma University, Japan, and by selected participants at the MAB symposium in Toronto. The recommendations and minor changes suggested by these professionals were made and the questionnaire subsequently sent to the selected sample. The final sample consisted of one hundred representatives of different organizations from thirty-eight countries throughout the world.

2.4 The questions

Questions were developed to understand to what extent such policies are established in other regions or municipalities; to determine jurisdictional responsibility; to identify implementation and enforcement.

Subsequently the questions are much more directed towards the fundamental issue of standards, guidelines, or policies related to land allocation for children's play spaces in the residential environment. The last question asks the respondents to apply the requirement where possible to three different residential communities. This question was designed to provide as accurate an application of the play space requirement as possible and to avoid misinterpretation on the part of the researcher. The questions throughout the instrument were designed to apply a balance between the open ended qualitative approach to data collection and the limited multiple choice quantitative approach. See Appendix C, where the questionnaire is provided for review.

2.5 Sample

The objective was not to achieve a set sample, but to obtain as wide a response as possible from as many countries as possible. The respondents were selected utilizing the following resources.

2.5.1 The International Playground Association membership list was scrutinized and a selected list of IPA representatives throughout the world was compiled. The list was assessed for housing and habitat related disciplines so as to contact the most nearly appropriate individuals and organizations.

2.5.2 The Child in the City project of the University of Toronto organized a week long symposium on "Managing Urban Spaces in the Interest of Children" during June 1979. The symposium was sponsored by the UNESCO project "Man and His Biosphere" and brought together experts from around the globe. This group was introduced to the current research project and requested to participate in the survey. All participants received a copy of a questionnaire after questionnaire development. Their comments helped to finalize the format and content of the final survey instrument.

2.5.3 Communication with the IPA secretary in Ottawa, the Canada Mortgage and Housing Corporation, faculty members of the University of British Columbia, and of Carleton University and officials from the City of Ottawa Planning Department, the University of Copenhagen and the Norsk Institut for By og Region Forskning, all provided additional contacts in the housing and child environment field of study. The above samples were used to compile a complete mailing list.

2.6 Data collection procedure

Using the network of contacts described under sample section, respondents in the various countries were solicited. Since most countries had only one respondent, not all levels of government were contacted, but the respondent was given the opportunity in the questionnaire to provide responses to questions regarding the existence of requirements at other levels of government. There are problems inherent in this method due to the subjective viewpoint of the respondent representing each country.

The questionnaire was introduced to the selected individuals and organizations in two ways. An introductory letter to the International Playground Association (IPA) members detailed the reason for the study, and provided a rationale for the IPA involvement in the project. The IPA members were also requested to assist with the study by forwarding the questionnaire to appropriate professionals within their country. In addition to the IPA letter of introduction, a subsequent letter to the potential respondents further explained the origin of the interest in undertaking this international inventory and comparative study of children's play space requirements. See Appendix B. The thirty-eight countries contacted are listed on page 8, and those which responded to the questionnaire are identified.

LIST OF COUNTRIES CONTACTED

RESPONSE	NO RESPONSE
AUSTRALIA	INDIA
AUSTRIA	IRELAND
BANGLADESH	ITALY
BELGIUM	JAPAN
BRAZIL	MALAYSIA
CANADA	MALTA
DENMARK	NIGERIA
EGYPT	PAKISTAN
ENGLAND	PERU
FINLAND	PHILIPPINES
FRANCE	SOUTH AFRICA
GREECE	UNITED STATES
HOLLAND	ZAMBIA
HONG KONG	
ISRAEL	
NEW ZEALAND	
NORWAY	
PORTUGAL	
SPAIN	
SWEDEN	
SWITZERLAND	
THAILAND	
USSR	
WEST GERMANY	
YUGOSLAVIA	

2.7 Processing data for comparison

Analysing quantifiable standards or guidelines from different countries does impose certain constraints. Most prevalent is the problem which arises when calculating space requirements in different units of measure. It has often been said that comparing space requirements in different countries for children's play spaces is like comparing "apples to oranges". This is clearly an indication of the difficulty of acquiring accurate information and of finding out how the spaces are calculated. In fact the data which was provided by respondents to this survey was relatively free of confusion despite the variety of measures used. In all cases the respondents clarified the measures used in their country so as to enable the researcher to establish a common measure and thus develop a comparative analysis of standards and guidelines in the different countries.

Play space requirements are determined in different countries by the units of measure listed below:

a) the number of m^2 per bedroom
b) the number of m^2 per bedroom excluding master bedroom
c) the number of m^2 per unit
d) the number of m^2 per child
e) the number of m^2 per child space
f) the number of m^2 per person
g) the number of persons per hectare

The major problem of analysis is thus to determine equivalencies for each unit of measure and to convert the space requirement into a common unit of measure. Once the common measure is resolved, it is important to assess the degree of control a municipality or country exercises to ensure the availability of children's play spaces in the residential environment through its requirements.

2.8 A common unit of measure

Inasmuch as the intent of the project is to assess the range of quantitative space requirements currently in existence throughout the world for children's play spaces in the residential context, this study is clearly much more focused on the issue of children's play spaces than that of the National Swedish Building Research (NSBR) Report 27, 1967. The problem of differential measurement or calculation has to be resolved for purposes of comparison in this study.

The conversion model established by Esbensen (1978) has been selected to effect a comparative analysis of play space requirements in these countries. The conversion model uses the three bedroom home as the common family residence. This may vary from apartment high rises, walk-up apartment blocks, row houses, stacked houses, to single semi-detached or single-family homes. With the hypothetical family of four living in a typical three bedroom family unit, the conversion from the above range of space requirements is possible. The conversion model was applied to each country's requirement, and the results tabulated to allow comparison. The resulting conversion makes it possible to compare the per unit play space requirements or recommendations in different countries.

3. DISCUSSION OF THE FINDINGS

3.1 Responses

The survey consisted of one hundred mailed questionnaires sent to representatives in thirty-eight countries. Thirty-four responses were received from twenty-five different countries. In addition to those formally contacted, information was available from previous work (Esbensen, 1979) and thus information from Canada, USSR, and Bangladesh is included in this report. The final report is thus inclusive of the residential play space requirements from twenty-five countries. The quality of the responses from the twenty-five countries varies considerably; some respondents having filled out every question with great detail, while others were very brief. The information necessary to establish a comparative inventory of play space requirements was however provided. The following summaries reflect the responses provided to the questions.

3.2 Standards

Ten of the countries indicated that they have standards for children's play spaces in the residential environment. Of these ten countries, nine have standards at the national level, while only Brazil reports standards at the municipal level in the cities of Rio de Janiero and São Paulo. See list of countries with standards.

LIST OF COUNTRIES WITH STANDARDS

COUNTRIES	NATIONAL	MUNICIPAL
Brazil		X
Canada	X	
Denmark	X	
England	X	
Finland	X	
Norway	X	
Spain	X	
Sweden	X	
West Germany	X	
USSR	X	

The requirements of the standards is very quantitative, and indeed enforceable in the USSR, Denmark, Sweden, Finland and Spain. In the other nations the national standard is primarily advisory, in the sense that the municipalities can choose to apply the national standards or in fact to ignore them. Thus in Canada, England, Norway and West Germany

there are strong indications that great variations exist in the provisions made for play. The differences are often times attributed to the local level interest or lack of interest in developing children's play environments close to their homes. It is evident from this study that the majority of municipalities and policy makers in different countries are unfamiliar with the strategies used in more densely populated western european countries to provide play spaces for children.

Thus play space implementation has varied considerably in these countries due to the lack of standards at the municipal level or lack of implementation of national standards at the regional or the municipal level. Those countries that do not have legislation are interested in the findings of this study so as to develop appropriate public policy in their country to ensure play spaces are provided.

3.3 Guidelines

Responses from the ten countries responding positively to the existence of standards reveals that all have developed guidelines. These guidelines serve as recommendations to assist municipal authorities, architects and planners in creating appropriate spaces for children's play. While only ten countries have both standards and guidelines it is interesting to note that eighteen of the twenty-five countries do have guidelines which recommend that play spaces be made available, that these spaces be located within certain proximities of the dwelling and that such spaces be of a relatively specific size to accommodate the play of children. Of these eighteen countries, fifteen have established guidelines at the national level, however, Brazil, Hong Kong and Portugal operate only with municipal or town planning act guidelines. See list of countries with guidelines.

LIST OF COUNTRIES WITH GUIDELINES

COUNTRIES	NATIONAL	MUNICIPAL
Brazil		x
Canada	x	
Denmark	x	x
England	x	
Finland	x	
France	x	
Holland	x	x
Hong Kong	x	x
Israel	x	
New Zealand	x	
Norway	x	x
Portugal		x
Spain	x	x
Sweden	x	x
Thailand	x	x
USSR	x	x
West Germany	x	x
Yugoslavia	x	

The guidelines are an advisory measure used by any level of government to indicate its desires for certain conforming actions by the people. Such methods are not enforceable and are consequently totally dependent upon social acceptability. For example in France the guideline has been in existance since 1967 and has recommended that a minimum of 13 m^2/unit be allocated for children's play spaces. Unfortunately the family housing projects in France have failed to apply these guidelines.

The inefficiency of the guideline requirement for children's play spaces in France demonstrates what can or cannot happen for children when requirements are purely advisory.

In contrast, advisory guidelines are taken much more seriously as a societal commitment to a certain action in other societies. In Israel, the guidelines for children's play spaces enable much more child appropriate, scale, density and space availability than is apparent in France. The Israeli housing situation is also considerably different as 2/3 of the housing is government sponsored and thus guidelines are more easily applied. While guidelines are effective under certain conditions, the critical factor is the social cultural acceptability of play spaces for children.

It is evident from this study that the standards with quantitative requirements are most efficient in providing quality environments for children's play spaces near to their homes. This is particularly important in countries where housing is a speculative private free enterprise business, for in those cases it is often times the children's interest which is thrown out for the sake of the profit margin.

3.4 National standards using conversion model

National standards for children's play spaces in the residential environment are established in the following nine countries listed according to the generosity of their quantitative requirements.

Denmark	35 m^2/unit for 40 units or more
Sweden	27 m^2/unit for 8 units or more
Norway	5-20 m^2/unit depending on size of the development
Spain	18 m^2/unit
Finland	10 m^2/unit
England	9 m^2/unit
Canada	5 m^2/unit for 20 units or more
West Germany	3-5 m^2/unit
USSR	4 m^2/unit

3.5 Local standards using conversion model

Standards at the local/municipal level for children's play spaces exist in the following nine countries. England does not have the municipal requirements, but Brazil has joined the list with the municipal policies in two cities.

Denmark	35 m^2/unit for 40 units or more
Sweden	27 m^2/unit for 8 units or more
Norway	5-20 m^2/unit depending on size of the project
Spain	18 m^2/unit
Finland	10 m^2/unit
England	9 m^2/unit
Canada	5 m^2/unit for 20 units or more (in some municipalities)
West Germany	3-5 m^2/unit
Brazil	4-5 m^2/unit for residents' amenity spaces
USSR	4 m^2/unit

For a summary of the standards and guidelines, their jurisdictional level of implementation and the requirements for all countries responding to this study, refer to Table A. It is noteworthy that even the countries that responded that no requirements exist stated an interest and concern that perhaps they were needed in the future to prevent haphazard planning which in the past resulted in undesirable living environments.

3.6 Elaboration of findings

Thus, for the most part in those countries where national level standards have been developed municipal play space standards also exist. It is important to recognize that in some nations this is due to the political and economic structure of the country. In Denmark, Finland, Spain and Sweden the law applies automatically to municipalities. This format often times creates greater consistency in the allocation of land for play spaces. In Canada, England, Norway and West Germany the municipalities are free to determine whether or not to apply the national play space standards for the family housing projects. In Canada, the Canada Mortgage and Housing Corporation requirements are applied to comprehensively planned developments covered under the National Housing Act. In addition municipalities usually have a recreation and parks policy which requires developers to give 5% of the land (or 10% in some cases) for recreation purposes. However, this policy allows the trade-off of cash in lieu of land. This cash is then applied to a large recreation facility that services a wide regional area. The result is a facility that is located beyond the distance from the unit recommended for children in the Canadian standards and guidelines. Consequently there is great variance among

municipalities and the provision of play space facilities across Canada. In Norway 220 of the 450 municipalities have adopted modified versions of the national standards and have put the requirement into the municipal loan planning policies as a "should". Thus local variances and enforcement practices are still possible.

This practice of adopting the national (NHA) standards is not common in Canada, where in fact only half a dozen municipalities have reportedly developed play space policies within the town planning policies for family housing developments.

In England the standards are also national, but apply only to council housing developments. Again, local planning authorities may choose to adopt these requirements for purposes of development control. Information as to the extent of municipal adoption of the national standard is not available at the present time. See Table B for a synopsis of the responses to question 4.

A small unpublished survey reported by the English respondent showed that approximately 15% of the public housing developments construct play spaces to and often above the standard and another 15% to a lower standard. In cases of unsubsidized housing five percent of housing schemes surveyed had play spaces below standards. There is, however, no published information as to the extent of municipal adoption of the national circular.

Finland established play space requirements in 1974 which made the national level standards and guidelines for play spaces applicable at the municipal level. While the requirement is established for the whole country it is not known whether they are appropriately implemented. In Spain, the national legislation also applies at the municipal level. The standards are in practice strictly enforced. There appears to be an inclination towards providing a range of play space opportunities for children in the residential environment in Spain. The requirements state that spaces are to be developed to provide for the physical, social and intellectual activities and increasingly concern is expressed towards meeting the emotional needs of the children. There is thus an indication of merging quantitative requirements with qualitative concerns.

Sweden has also established national standards and guidelines. The requirements apply to all family housing developments based on 27 m^2/unit. Sweden has however attempted to limit its focus on play ground equipment in its standards in recent years and increasingly is concerned with preserving nature and the play ability of the natural components in the residential environment. This concern is expressed increasingly through guidelines and advisory documents supplementing the quantitative requirements.

In Hong Kong, New Zealand and Thailand the responses indicate the existance of guidelines. However, close examination of their responses and review of accompanying documents reveals that the guidelines in these countries are not specific to children's play spaces in the residential environment. In fact the requirements mentioned in the guidelines of these countries deal with the total amenity space, that is the open spaces for all user groups including children. The responses from these countries are not directly related to the scope of this study, but provide interesting and valuable information nonetheless. It is interesting to note that in Hong Kong and Thailand the open space requirements for amenity areas are assigned so as to provide urban residents with spaces for relaxed family outings, such as a walk in the park. The availability of spaces for incidental play of children close to home happens on the front door step which, depending upon the location, is more or less safe. The scarcity of land, the cost and the density of these countries makes the problem difficult to resolve. Both Hong Kong and Thailand have established social, recreational, and cultural centres which in part attempt to provide facilities and organizations to provide children with places and opportunities to "play".

In Brazil it is reported that people live mostly in multi-unit buildings such as high rise apartments. The municipal edification (building) codes of the municipalities of Rio de Janeiro and Sao Paulo have reportedly developed standards and guidelines for children's play spaces. The municipal standard for Rio applies to buildings of more than seven units, and consists of 1 m^2 per room. In reality this requirement is the space from which all recreation areas are derived. The actual space allocation for children's play spaces is very limited within this code. Consequently efforts to organize activities for children in Brazil have followed similar patterns to the opportunities provided in Hong Kong. That is activities of a social, cultural and "play" nature.

The elimination of the above respondents from the list of countries with either standards or guidelines thus leaves fourteen of the twenty-five countries studied with criteria for children's play spaces. Table B summarizes the responses from the twenty-five countries including those countries which have only open space requirements in the standards or guidelines for new communities. The date in the column "year" refers in some cases to the date of implementation and in others to the publication date of the current document. Dates are not to be used to establish a historical development of the requirements. See Appendix D for additional data reported from seven countries surveyed by the NSBR, 1967.

Fourteen countries with standards or guidelines for children's play spaces responded to question 5, "Are requirements for all family housing developments"? The responses indicate that only seven of these countries, Finland, Holland, Norway, Spain, Sweden, West Germany and Yugoslavia have criteria for all family housing developments. In the case of Finland, Holland, Norway and West Germany the affirmative responses were qualified by statements such as, "it is not known to what extent the criteria are enforced, not enforced, apply only to public housing and they are primarily enforced for new developments outside the older residential communities". Thus it is only in Spain, Sweden and Yugoslavia that the respondents indicate that the criteria are enforced, and that this is accomplished through the approval process at the local level. See Table C for a summary of responses to question 5 and 6.

Closer examination of the negative responses to this question reveals that the qualifiers for the negative responses closely resemble those given some affirmative replies. In Denmark for example the respondent said no because the standard does not mention single detached housing. In Canada, England, France and Israel the criteria apply only to public housing, insured lending programs or moderate price housing ("HLM"). See Appendix B for a summary of the responses by country.

In response to question 6, "Are financial incentives provided?" the information suggests that some countries provide government low interest loans for items such as play grounds. This is the case in Finland, Norway and Sweden. In Finland, such loans are theoretically available but in practice the funds are often times used up for other purposes. In Hong Kong, England and Yugoslavia it is possible to develop children's play spaces as a result of public grants or municipal contributions. Other countries pass the "extra" cost of children's play spaces on to the consumers. See Table C, question 6 for an overview of the responses. A closer scrutiny of the responses indicates that governments generally are very reluctant because of the supposed cost implications to provide incentives for such spaces. This is perhaps an indication of how much adults assume that play environments are available or how little adults value the importance of such spaces for children to develop. It is indeed difficult for most societies to support beliefs with money, and children are throughout the world, the most vulnerable.

Question 7 "Do the requirements apply to all housing?" is different from question 5 inasmuch as the concern is with the type, density and age of the housing development. Although eight countries indicated that the requirement applies to all housing it is clearly evident from the complete responses and supporting documentation that older residential communities and low density single detached housing developments are excluded in all cases from the standards or guidelines. In Denmark and Sweden the commitment to create living environments with components of equal quality is causing increasing efforts to apply the standards to older residential communities and low density single detached housing developments. In Sweden this trend is reportedly due to the consumer demands coming from adults who have experienced the high density living environments where play spaces are an integral part of the housing project. Holland and Canada appear increasingly concerned with the development of infill play spaces in older residential communities. The extent to which this trend becomes practice and the extent that this practice is due to the play space requirements warrants further study. See Table D, question 7 for an overview of the responses received from each country.

The responses to question 8 helped to develop the rationale for the conversion model used in the calculation and subsequent analysis of the play space requirements. To the question "How are play space requirements determined?" ten countries indicated that the play space calculation is determined by the number of square meters per unit. The countries using this method of space calculation are Denmark, Finland, Holland, Hong Kong, Norway, Portugal, Spain, Sweden, Thailand and West Germany. In fact only eight of these countries have standards or guidelines for children's play spaces. Hong Kong and Thailand have already been excluded from consideration as their requirements apply to open spaces. In addition to Yugoslavia, Holland and Portugal also determine the number of square meters per child to calculate the play spaces in the residential environment. England uses the term child bedspace to calculate space requirements, while Brazil uses the measures of 1 m^2 per room. Thus of the fourteen countries having either standards or guidelines for children's play spaces eight of them calculate such spaces based on the number of m^2 per unit. The conversion to m^2 per unit from the other methods is not complicated in the case of the other countries. Thus the data presented in Table B is clearly indicative of the state of the art of play space requirements throughout the world.

The issue of land use is still very crucial to the problem of allocation of "land" for children's play despite competing uses. Thus in order to better understand how different countries are able to set aside land for children's play, question 9 was designed; the play space is allocated from what other space requirement in the development? In all but four of the seventeen countries responding to this question, the tendency is clearly to allocate the play space area from the amenity area of the development. Thus in those cases where children's play spaces are very generous it is evident that the children have greater access to a larger percentage of the total amenity spaces in the residential environment. What is clear in the Canadian context is that only 5.88% of the amenity area of a residential environment where the NHA standards are enforced is set aside for children's play. (Esbensen, Habitat 1979). In Denmark based on its requirements it might be hypothesized that 41.16% of the amenity area is set aside for children's play spaces. Certainly similar hypothesis can be made of the conditions in other countries.

If in fact the amenity area is already required then the question is merely one of priorities, not of land availability (See Question 9, Table E). This issue warrants further clarification through additional research. In this study it is suggested that the play space opportunities for children are very limited, and only a few countries in Western Europe and Scandinavia have made strong legal or policy commitments to ensuring the availability of space within the residential environment for children to play. In the countries where the space requirements are the most clearly stated, play spaces are also designated for different age groups. Thus in Canada, Denmark, Finland, Norway, Sweden, West Germany and Yugoslavia the respondents replied positively to question 10, concerning play spaces for different age groups. While these countries all have requirements which designate spaces for different age groups, it is not to be assumed that they can provide for these play spaces within the existing requirements. For example, in Canada the requirements administered by the Canada Mortgage and Housing Corporation have been studied in detail by the Canadian Parks and Recreation Association's National Committee on Play, and its report to CMHC clearly states that it is impossible to adequately deal with the play needs of different age groups given the current minimum requirement.

In all countries responding to the study, the requirements applied only to outdoor play spaces. In West Germany requirements are established for children's spaces within the residential unit, but these are clearly private spaces for children living in the family and again not part of the focus of this study. Indoor play opportunities for children in medium and high density residential developments may in fact be crucial in some areas of the world.

Young children growing up in high rise housing projects are provided greater limitations in their social contact and body movement than children in lower density developments. The allocation of indoor play spaces for young children and meeting places for school age children is definitely an issue which warrants further investigation.

The response to question 12 is not surprising as in fact, indoor space requirements are often administered by other organizations, either recreation, culture or social services. Denmark and Sweden in particular are investing resources in the development of indoor play spaces. Their efforts reflect the collaborative efforts of various ministries and these activities should be studied in detail by those countries having similar climatic and space problems.

The last question summarized in this section deals with the issue already partially discussed in the summary of question 15. "Is it possible to determine the total amount of communal (non-private) land that is set aside for children in typical new residential developments in your country?" Only four respondents indicated that it was possible to determine the percentage of land set aside for play purposes. However, upon closer examination of their responses it became obvious that each respondent interpreted the question differently and thus totally confused the potential comparisons. See Table F.

This section has summarized and compared the responses of twenty-five countries from around the world. See Appendix A for summary of each country. It is evident from the response that all the countries are cognizant of the problem faced by children living in the increasingly urban residential environments around the world. The extent to which the problem is recognized and dealt with is greater in some of the more densely populated western European countries. It is evident that guidelines are more acceptable to public policy makers than standards. In this study 72% of the countries responding have established guidelines for children's play spaces at some level of government. This fact and the overwhelming call for comparable requirements leads the author to speculate that there is a sequential development from guidelines to

standards. While only 40% of the responding countries have standards, 55.5% of the respondents with guidelines also have standards. Thus, a significant number of countries have merged the quantitative requirements with additional qualitative recommendations which are expressed through the guideline documents. The tendency to develop standards after guidelines as reported by a majority of respondents indicates that countries throughout the world have come to recognize that public policies for children's play spaces must be legislatively binding in order to be implemented effectively.

4. CONCLUSION

Cultural and social values may affect the extent to which a country chooses to deal with the provision of children's play spaces in the residential environment. The problem of allocating the space from scarce resources is however of common concern. In the majority of the countries contacted in this study the requirements for amenity spaces for the residents of a community are often sufficient to provide more space for the children. In these instances it is recommended that the National, Regional and Municipal policies become more consistent with the play needs of children. Several of the countries have demonstrated their ability to establish such policies, guidelines and standards for children's play spaces. This study reveals that the countries which have developed the most generous quantitative requirements have adopted the strategy of having both standards and guidelines. The countries where such requirements are established are most consistent in their ability to apply the requirements across the country.

The findings clearly indicate that it is those countries which have articulated a strong "pro-child" position which have developed public policies supporting that position. Interestingly, it is also those countries which have the most generous requirements for the allocation of play spaces for children. In view of the findings it is very plausible that minimal quantitative requirements for the allocation of children's play spaces will cause startling inadequacies in family housing projects of the future.

Although the findings are alarming, this author is optimistic that those countries with an interest in protecting the rights of children will learn from those which have developed strong public policies to support the child's right to play. This optimism is however balanced by the reality that the free enterprise system in which residential areas are simply developed for profit without regard for children is stronger than the child's advocacy movement.

The information provided in this report is designed to help public policy decision makers in governments throughout the world develop the necessary policies to assure that the children of today and those to come will have ample opportunities for play within their living environment.

5. RECOMMENDATIONS

This report provides a profile of the standards and guidelines for children's play spaces in residential environments in twenty-five countries. From the findings reported herein the following areas of concern and directions for further study are identified.

1. That this study become a longitudinal project to provide periodic reports as to the state of the art of standards and guidelines for children's play spaces.

2. That the responsible organizations in each country undertake to study the extent of municipal adoption and enforcement of play space criteria for children in the residential environment.

3. That studies be conducted specifically in North America to assess the extent to which the issue of children's play spaces in the residential environment is dealt with through either local, provincial (state) or federal policies.

4. That further investigations as to the quality of the development of play spaces be undertaken in each country.

5. That such qualitative studies be of an international comparative nature to facilitate further sharing between decision makers.

6. That government offices at different levels work together with non-governmental agencies to disseminate knowledge and to develop policies dealing with play space opportunities for children.

7. That the strategies used in different countries or municipalities be studied to assess the conditions, political and social which are necessary for successful implementation of standards or guidelines for children's play spaces.

8. That responsible governmental agencies establish long-term commitments with Research Institutions to further the advancement of theory and practice related to children's play spaces in the residential environment.

9. That the responsibility centres in each country establish a method of developing channels of communication and exchange of information.

10. That governments in different countries support their acknowleged concern about the lack of children's play spaces through developing interdepartmental and national ombudsmen to advocate on behalf of children's needs in the living environment.

11. That the disparity between public open space and play space in the residential environments be articulated in terms of use and defined more clearly in those countries where there is not a clear distinction.

12. That public awareness campaigns be launched in all countries to help parents, children and other consumers to be acutely aware of the problem and the potential solutions that limit play spaces within the residential environment, and to develop an informed advocacy to ensure the child's right to play.

13. That this information be shared with developing nations where industrialization and rapid urban growth are quickly eroding the spaces necessary for their children's growth and development.

14. That ministries of education be notified of their responsibilities to develop the school sites more appropriately to compensate for the lack of natural play spaces close to the residential environment.

15. That efforts be made to deal with the needs for indoor play spaces for children in those countries where climatic conditions dictate a need for such alternatives.

It is hoped that these recommendations will be implemented and that public policy practice for children improves throughout the world.

TABLES

A THROUGH F

TABLE A
SUMMARY OF FINDINGS RELATING TO THE EXISTENCE OF REQUIREMENTS
QUESTIONS 1, 2 AND 11

COUNTRY (alphabetically)	Question 1 a STANDARD YES	Question 1 a STANDARD NO	Question 1 b GUIDELINE YES	Question 1 b GUIDELINE NO	Question 2 NAT.	Question 2 REG.	Question 2 MUN.	Question 11 REQUIREMENTS CONVERTED TO THE COMMON UNIT OF MEASURE	YEAR
AUSTRALIA		X		X		X		None	
AUSTRIA		X		X				None	
BANGLADESH		X		X				None	
BELGIUM		X		X				None	
BRAZIL	X		X				X	4-5 m^2/unit for total amenity area	1958 Rio de Janeiro
CANADA	X		X		X			2.5 m^2/bedroom - 5 m^2/units	1978
DENMARK	X		X		X	X	X	35 m^2/unit 40 or more units	1977
EGYPT		X		X				None	
ENGLAND	X		X		X			9 m^2/unit - 10 or more units ("3 m^2/child bed-space")	1972
FINLAND	X		X		X			10 m^2/unit per 100 m^2 living space or 10-20 m^2/ unit depending upon project	1974
FRANCE		X	X		X			13 m^2/unit	1967

COUNTRY (alphabetically)	Question 1 a STANDARD YES	Question 1 a STANDARD NO	Question 1 b GUIDELINE YES	Question 1 b GUIDELINE NO	Question 2 NAT.	Question 2 REG.	Question 2 MUN.	Question 11 REQUIREMENTS CONVERTED TO THE COMMON UNIT OF MEASURE	YEAR
GREECE		X		X				None	
HOLLAND		X	X		X	X	X	17 m^2 - 27 m^2/unit? Depends upon size of dev.	
HONG KONG		X	X		X	X	X	General municipal guidelines for open spaces No specific quantitative space requirements	1971
ISRAEL		X	X		X			8 m^2/unit (2 m^2/person)	1975
NEW ZEALAND		X	X		X			None	1977
NORWAY	X		X		X		X	5 m^2 - 20 m^2/unit Depends upon size of dev.	1977
PORTUGAL		X	X				X	6 m^2/unit	
SPAIN	X		X		X		X	18 m^2/unit	1978
SWEDEN	X		X		X		X	27 m^2/unit	
SWITZERLAND								No data provided.	
THAILAND		X	X		X	X	X	1.8 m^2/person applies to all open spaces 10 m^2/family	1972

COUNTRY (alphabetically)	Question 1 a STANDARD YES	NO	Question 1 b GUIDELINE YES	NO	Question 2 NAT.	REG.	MUN.	Question 11 REQUIREMENTS CONVERTED TO THE COMMON UNIT OF MEASURE	YEAR
USSR	X		X		X	X	X	4 m^2 - see Appendix D	
WEST GERMANY	X		X		X	X	X	3-5 m^2/unit	1967-68-75
YUGOSLAVIA		X	X		X			4 m^2/child - 8 m^2/unit	1973
								* in case of a per child unit of measure the average of two children per family household was chosen.	
Esbensen conversion model uses the three bedroom home as the typical family residence (See Page 9, Section 2.8)									

TABLE B
SUMMARY: UNIFORMITY OF APPLICATION OF REQUIREMENTS
QUESTION 4
By Level of Stringency Where Applicable

COUNTRY	RESPONSE
Denmark	Uniformly applied (standards and guidelines).
Sweden	Reportedly application is assured through review process of developmental plans at the local level (standards and guidelines).
Spain	Very strict application (standards and guidelines).
USSR	Very uniformly, with consideration given to climatic variables (standards and guidelines).
Norway	About 50% of municipalities have adopted modified versions of guidelines. About 10% have adapted the standard version (standards and guidelines).
Israel	Applied more uniformly in areas such as development towns where most housing is public. Variations may occur as a result of climatic or topographic considerations. (guidelines)
Finland	The requirements are established for the whole country, whether they are appropriately implemented is unknown.
Brazil	There is no uniformity across the country.
Canada	The standards and guidelines vary greatly in their application.
England	There is no information on the degree of uniformity at this time.
France	Hardly applied.
Holland	The guidelines are not applied uniformly across the country.
Hong Kong	Guidelines are not uniformly applied.
New Zealand	They are not enforced. It is left to local discretion.

COUNTRY	RESPONSE
Portugal	In general the recommendations are not applied.
Thailand	Difficult to assess compliance (See Appendix A. Note: Thailand).
West Germany	The application of the state and municipal legislation is very different. There are a lot of exemptions possible and the local authorities have some freedom of interpretation.
Yugoslavia	They are applied during development planning and reviewed. Since they are only guidelines, they should not be treated as standards.

TABLE C
SUMMARY OF APPLICATION OF REQUIREMENTS AND INCENTIVES
QUESTIONS 5 AND 6

COUNTRY	5. Are the requirements for all family housing developments? YES	5. NO	6. Are financial incentives provided? YES	6. NO	COMMENTS
AUSTRALIA	X			X	Within the ACT the system is uniform. Not duplicated elsewhere in Australia.
AUSTRIA		X		X	
BANGLADESH					No information available.
BELGIUM		X		X	
BRAZIL		X	X		5. The requirements towards play space allocation are made for buildings of more than 7 units. They are enforced when still in plan, the housing development is sanctioned by the Municipal Edification Bureau. 6. By the Edification Code which says that an extra floor can be added to the total highness of the building when used exlusively as a communal area for the residents. The play space for children is located on this floor.
CANADA		X		X	Only NHA insured lending program for comprehensively planned developments.
DENMARK		X		X	The standards do not mention single detached housing.
EGYPT		X		X	

COUNTRY		5. Are the requirements for all family housing developments? YES	5. NO	6. Are financial incentives provided? YES	6. NO	COMMENTS
ENGLAND			X	X		5. Public housing only. 6. Loan sanction aid subsidy is given by the Department of the Environment for public sector housing. No incentives for private developers.
FRANCE			X		X	Only to Habitations à Loyer Modéré (HLM, Medium priced housing).
FINLAND		X		X		5. Apply to the whole country but it is not known to what extent they are enforced. 6. In theory loans are possible, in reality often no funds left for play spaces.
GREECE			X		X	
HOLLAND		X			X	5. Not enforced.
HONG KONG	A	X			X	A5. By granting of "planning" permission to commence the scheme.
	B					For public housing estates, financial incentives are provided by the government. For private developers, costs are included in the price for sale.
ISRAEL			X		X	5. Only public housing developments 2/3 housing is publicly built.

COUNTRY	5. Are the requirements for all family housing developments? YES	NO	6. Are financial incentives provided? YES	NO	COMMENTS
NEW ZEALAND		X		X	5. Could be through Town and Country Planning Act 1977 and with Countries Amendment Act and Municipal Corporation Act 1979 specifically relate to residential sub-division.
NORWAY	X		X		5-6. See Norway in Appendix "C" for clarification. Loans are available.
PORTUGAL		X		X	6. Since 25 April 1979 the National Directory of Sports have financed some projects for residential play spaces.
SPAIN	X		X		5. Enforced through the approval plans for the development.
SWEDEN	X		X		5. During discussions of plans and Standards at local planning level. 6. Low cost government loans.
SWITZERLAND					No information given.
THAILAND		X	X		6. In some cases only financial resources are provided by the Metropolis and the Housing Welfare Bank.
USSR					No information available.
WEST GERMANY	X			X	5. Public housing only for interior spaces.

COUNTRY	5. Are the requirements for all family housing developments? YES	NO	6. Are financial incentives provided? YES	NO	COMMENTS
YUGOSLAVIA	X		X		5. Settlement planning process. 6. Included in the price of the unit or through contributions made by the residents of a town.

TABLE D
SUMMARY OF HOW THE REQUIREMENTS ARE EXPRESSED
QUESTIONS 7 AND 8

COUNTRY	7. Do the requirements apply to all housing? YES	NO	COMMENTS	8. How are play space requirements determined? a*	b*	c*	d*	e*	N/A
AUSTRALIA	X		Not old						
AUSTRIA			No INFORMATION GIVEN						
BANGLADESH			NO INFORMATION GIVEN						
BELGIUM			NO INFORMATION GIVEN						
BRAZIL		X	New row housing and high rise only	X					
CANADA		X			X				
DENMARK		X	Exclude single detached old and rehab.			X			
EGYPT			NO INFORMATION GIVEN						
ENGLAND		X	Only public sector					X	
FINLAND	X					X			
FRANCE		X	"HLM" medium cost housing only						X
GREECE			NO INFORMATION GIVEN						
HOLLAND		X	Not to single detached low density or old.			X	X		
HONG KONG		X				X	X	X	
ISRAEL	X		All publically built medium and high density new						m^2/ person
NEW ZEALAND			Could be						X

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	7. Do the requirements apply to all housing?			8. How are play space requirements determined?					
COUNTRY	YES	NO	COMMENTS	a*	b*	c*	d*	e*	N/A
NORWAY	X	X	In theory Yes, in practice No.			X			A distance in meters
PORTUGAL		X				X	X		
SPAIN	X		Except old and low density			X			
SWEDEN	X					X			
SWITZERLAND			NO INFORMATION GIVEN						
THAILAND	X					X			
USSR			NO INFORMATION GIVEN						
WEST GERMANY		X				X			
YUGOSLAVIA	X		Except old and single detached types				X		
			*	m2/ bedroom	m2/ bedroom excluding master bedroom	m2/ unit	m2/ chld	m8/ chld spce	

TABLE E
SUMMARY OF HOW REQUIREMENTS ARE DESIGNATED
QUESTIONS 9 AND 10

	9. The play space is allocated from what other space requirement in the development?					10. Are play spaces designated for different age groups?		
COUNTRY	a*	b*	c*	N/A	COMMENTS	YES	NO	COMMENTS
AUSTRALIA	X						X	
AUSTRIA					NO INFORMATION GIVEN			
BANGLADESH					NO INFORMATION GIVEN			
BELGIUM					NO INFORMATION GIVEN			
BRAZIL	X						X	
CANADA	X					X		
DENMARK	X					X		See 22
EGYPT					NO INFORMATION GIVEN			
ENGLAND	X						X	
FINLAND	X					X		See Appendix "A" - Finland
FRANCE				X				
GREECE					NO INFORMATION GIVEN			
HOLLAND	X							See Appendix "A" - Holland
HONG KONG	X	X	X		Wherever space available		N/A	
ISRAEL	X				40% of the area		X	
NEW ZEALAND	X				10% of area		X	

	9. The play space is allocated from what other space requirement in the development?					10. Are play spaces designated for different age groups?		
COUNTRY	a*	b*	c*	N/A	COMMENTS	YES	NO	COMMENTS
NORWAY	X					X		See Appendix "A" - Norway
PORTUGAL					See Appendix			See Appendix "A"
SPAIN				X				No response
SWEDEN	X					X		See Appendix "A" - Sweden
SWITZERLAND					NO INFORMATION GIVEN			
THAILAND	X						X	
USSR					NO INFORMATION GIVEN			
WEST GERMANY	X	X				X		
YUGOSLAVIA				X			X	See Appendix "A" - Yugoslavia
*	amenity area for the project	private area of the unit	parking area of the project					

TABLE F
SUMMARY OF THE CHARACTERISTICS AND DISTRIBUTION OF THE REQUIREMENTS
QUESTIONS 12 AND 15

	12. Does the play space requirement include provision of indoor spaces?			15. Is it possible to determine the total amount of communal (non-private) land that is set aside for children in typical new residential developments in your country?		
COUNTRY	YES	NO	COMMENTS	YES	WHAT % FOR PLAY USE	NO
AUSTRALIA		X				X
AUSTRIA		X				X
BANGLADESH		X				X
BELGIUM		X				X
BRAZIL		X				X
CANADA		X		X	5.88% of communal space goes to play space	in theory
DENMARK		X				X
EGYPT		X				X
ENGLAND		X		X	24% average communal open space/dwelling	
FINLAND		X				X
FRANCE		X				X
GREECE		X				X
HOLLAND		X				X
HONG KONG		X				X
ISRAEL		X		X	10-13% variation between different size projects	

	12. Does the play space requirement include provision of indoor spaces?			15. Is it possible to determine the total amount of communal (non-private) land that is set aside for children in typical new residential developments in your country?		
COUNTRY	YES	NO	COMMENTS	YES	WHAT % FOR PLAY USE	NO
NEW ZEALAND		X				X
NORWAY		X				X
PORTUGAL		X				X
SPAIN		X		X	10% minimum communal space	
SWITZERLAND		X				X
SWEDEN		X				X
THAILAND		X				X
USSR		X				X
WEST GERMANY		X				X
YUGOSLAVIA		X				X

SUMMARY OF FINDINGS BY COUNTRY

The following section includes a summary of the information received from the responding countries. The numbers correspond to the numbers of the questions in the study survey. All responses to the questions are included in the summary. In some cases the content of the letter response was translated and cited in the summary.

Canada, Bangladesh and the U.S.S.R. have summary sheets which were developed from information obtained from other reports Esbensen, 79.

The following countries provided reference materials, both originals and copies of the guidelines, standards and policies governing children's play spaces in the residential environment:

BRAZIL
DENMARK
ENGLAND
FINLAND
FRANCE
HOLLAND
HONG KONG
NEW ZEALAND
NORWAY
PORTUGAL
SPAIN
SWITZERLAND
SWEDEN
WEST GERMANY
YUGOSLAVIA

The countries are listed in alphabetical order.

AUSTRALIA

Australian Capital Territory only.

N.B. One response

1. No standards
   No guidelines

2. They have regional standards or guidelines.

   The Australian Capital Territory has a population of 220,000. Population densities in the residential areas are low (43 persons per hectare). Provision of open space within developments is safeguarded by application of site area ratios, prescribing that a set proportion of the total site not be built on.

   N.B. All land is government owned and tenure is leasehold.

3. The National Capital Development Commission has jurisdiction of these criteria.

4. This criteria is applicable only within the Australian Capital Territory.

5. Yes, as above.

6. No, not applicable.

7. Yes, except old.

8. Not applicable.

9. a) (The unbuilt area of the site)

10. No

11. a) No response
    b) all outdoor

12. No

13. Nil

14. a) next to the private yard

15. No

16. No response.

17. Most commonly the private yards, which are normally in excess of 500 m^2 (excl. house and buildings) are used for play. In medium density developments courtyards of approximately 50 m^2 are used by younger children. Older children use publicly provided open space provided by government at the rate of 4 ha. per 1000 population.

18. The amount of space is no problem in the Australian Capital Territory. The quality of the development of the space, for all ages is often poor and the case for greater investment in these spaces is exacerbated by low population densities.

19. N.C.D.C. has total planning and design control. An administering department (Dept. of Capital Territory) has responsibility for existing developments and works closely with the planning authority.

20. In Australia, Federal Policies have very little effect. State and regional policies effectively control the provision of housing, while municipal policies influence provisions at the level of individual subdivisions.

22.

Detached housing	20	total space	10,000 m^2
Row housing	40		2,000 m^2
8 storey flats	120		1,000 m^2

AUSTRIA

N.B. One response

1. a) no standards
   b) no guidelines

We are sorry not to be able to be of any help in this study. With this negative resonse we see no sense in completing the questionnaire. Our interest in the result of the study is very serious, we ask you therefore to send us a copy of the final report. This may help us to develop the necessary standards.

BANGLADESH

N.B. One verbal response

1. a) no standards
   b) no guidelines

BELGIUM

N.B. One response

1. No standard, no royal decree for play spaces in the residential environment.

   The only regulation which exist in Belgium are royal decrees which govern state intervention in cases of subsidies.

   a) For the installation of infrastructure in cultural and sport facilities. This also applies to play grounds (A.R. 22.02.74).

   b) For the redevelopment and urban renewal projects in the region Flamande (A.R. 15.12.78).

   c) For the operation of play ground facilities, (A.R. 10.02.61). None of these A.R. deal specifically with play spaces in the residential developments. Moreover they do not have the intention to stimulate the development of play spaces in the residential development. They deal primarily with large municipal play grounds and vacation play retreats.

Translated Comment

"During the International Year of the Child, we hope to develop a new law concerning play spaces in the residential environment - and as the authorities have informed us - it's not impossible to do."

BRAZIL

Rio de Janeiro

N.B. Two responses

1. Yes standards
   Yes guidelines

   Established for Rio de Janeiro 1958

2. They have municipal standards and guidelines.

   The building codes in Brazil are municipal responsibilities and it appears that only Rio and Sao Paulo have developed codes for children's play spaces.

3. The municipal Bureau of Public Work has jurisdiction of these criteria.

4. There is no uniformity across the country.

5. The requirements for play space allocation apply to buildings of more than 7 units.

6. Financial incentives are provided by the Edification Code which states that an extra floor can be added to the total highness of the building when used exclusively as a communal area for the residents. This floor contains the play space for children.

7. The requirements apply to new high rise and row housing development.

8. Play space requirements calculated on 1 m^2 per room, - but this is the area for recreation, - thus shared among different age and user groups.

9. a) the amenity area for the development.

10. No.

11. a) see no. 8
    b) no regulations - in general, they are outdoor spaces.

12. No

13. No equipment is required

14. No response

15. No

16. No response

17. In Rio de Janeiro people live mostly in buildings. It is forbidden by law to locate play spaces either on the high floors; next to garbage equipment and near places where cars cross. New buildings are compelled to use lower floors for parking spaces. Immediately over such floors (3, 4, and 5), play grounds are built with open and semi open spaces, including swimming pools, gardens, toys, etc.

18. The Edification Code does not provide specific suggestions for development of amenity areas. Developers often provide more than is required. The advertisements for new developments highlight the amenity areas. There is a new attitude concerning children's needs for recreation in both cities.

19. There is no connection within different government levels in regard to the Municipal Edification Code. The responsible agency - Bureau of Edifications operates within the Municipal district.

20. No response

CANADA

N.B. One response

1. a) Yes standards
   b) Yes guidelines
   c) 2.5 m^2/bedroom excluding the master bedroom
   d) 1967.

2. National but theoretically applicable to housing at local level through local branch offices.

3. The Canada Mortgage and Housing Corporation has developed National Housing Act standards which include site development criteria. These standards are applicable to comprehensively planned housing developments. In theory the standards could be enforced at the local level, in practice the enforcement of the site planning criteria varies specifically in the case of the play spaces for young children.

4. The standards and guidelines vary greatly in their application.

5. No - only CMHC insured lending housing development and comprehensively planned developments.

6. No financial incentives.

7. No

8. b) the play space requirements are determined by the number of square meters per bedroom excluding the master bedroom.

9. a) the play space is allocated from the amenity area for the development.

10. It is suggested in the guidelines Play Spaces for Preschoolers that 1 m^2 of the 2.5 m^2/bedroom excluding master bedroom be used to develop play spaces for preschoolers.

    a) N/A
    b) 1.5 m^2/bedroom excluding master bedroom for school age children's play spaces.
    c) N/A.

11. Depends on the size of a development.

12. No provision for indoor spaces.

13. Guidelines recommend site and design considerations based on user needs without giving specific recommendations of equipment for the play space.

14. b) most often play spaces are recommended to be placed a short distance from the private living area.

15. Yes

5.88% of total Minimum Amenity Area
11.55% of Total Communal Amenity Area - that is minus the private outdoor living areas, balconies, etc.

16. These areas are all set forth in descriptive format through guideline documents.

Planning Play Spaces for Young Children
Play Opportunities for School Age Children, 6-14 years.
Creative Playground Kit
Adventure Playground Kit

17. Varies considerably, much emphasis is still given to physical climbing equipment rather than to overall quality of play environments by the provision of different play opportunities.

18. In Canada 55% of all new housing since 1961 has been financed through the National Housing Act (NHA) which is administered by the Crown Corporation, Canada Mortgage and Housing Corporation (CMHC Statistics 1978). The (NHA) standard relating to the provision of children's play spaces in residential developments is applicable only to new housing financed through the NHA. However the NHA standards often serve as the model for municipal or provincial authorities developing standards similar to or more stringent than the Corporation's. The current NHA criteria for the provision of children's play spaces are stated in the Site Planning Criteria published by Canada Mortgage and Housing Corporation.

"In comprehensively planned developments of over 20 family units (two bedrooms or more) appropriately located, designed and landscaped play spaces shall be provided for preschool and school age children. A minimum of 2.5 m^2 per bedroom (excluding master bedroom) shall be provided as part of the minimum amenity area."

The effect of this standard is to provide 5 m^2 per unit for play spaces for preschool and school age children in developments consisting of three bedroom units.

The National Housing Act standards administered by CMHC do not provide criteria governing community play spaces. Requirements for such areas in Canada are specified through municipal or provincial standards. It should be noted however that the requirements for open space expressed in the criteria for "minimum amenity areas" in the NHA Site Planning Criteria is sufficient to require play spaces for preschoolers, school age children, and community play areas, to be designated and developed within the residential development.

Specific information concerning the organization, design, construction, landscaping and size of equipment in specific play spaces can be provided through guidelines. In Canada this approach has been adopted to help developers, planners and the general public better understand detailed issues of design, oganization and landscaping of play spaces.

19. The Canada Mortgage and Housing Corpration is a Crown Corporation which operates throughout Canada with the goal of housing Canadians. It initiates research and development into alternative housing forms as well as insuring the loans of many private mortgage banks. The corporation establishes standards which must be met in order for the mortgage to be advanced. Thus the CMHC has the means to assure that their criteria for quality environments for children are met. However there is great variance in the implementation of the NHA criteria at the local level. This is in part due to the conflict between Federal, Provincial jurisdiction in such areas as housing.

Calculations based on developments of 3 bedroom units: 2.5 m^2/bedroom - (excluding master bedroom) 2.5 m^2 x 2 = 5 m^2.

NO. OF UNITS	TOTAL SPACE	ALLOCATION OF SPACE
20	100 m^2	a. 40 m^2 b. 60 m^2
40	200 m^2	a. 80 m^2 b. 120 m^2
120	600 m^2	a. 240 m^2 b. 360 m^2

NO. OF UNITS	TOTAL SPACE	ALLOCATION OF SPACE
240	1200 m^2	a. 480 m^2 b. 720 m^2

a. preschoolers
b. school age children 6-14 years

The CMHC guideline Play Spaces for Preschoolers recommends that of the 2.5 m^2/bedroom:

1 m^2/bedroom should be designated for preschoolers

1.5 m^2/bedroom should be designated for school age children 6-14 years

or 2 m^2/unit for preschoolers
3 m^2/unit for school age children 6-14 years

DENMARK

N.B. Two responses

1. a) Yes standards
   b) Yes recommendations

   The essential components of the legislation concerning play and leisure areas in Denmark are identified in the 1977 copy of the Building Norms and Regulations (Bygnings reglement). These regulations apply to all of Denmark with the exception of the Faero Islands and Greenland.

   The requirement for children's play spaces are clearly itemized within the regulation governing open space planning for residential developments. The criteria state that when a project is planned for more than eight families, a portion of the open space must be developed as play space for children. This also applies to existing developments where possible. Space is allocated on the basis of 20 m^2 per unit. Of the 20 m^2, 10 m^2 per unit will be used to develop adequate play spaces for young children close to home. For every 30 units, a play space not less than 200 m^2 shall be provided for young children (preschoolers) not more than 50 m from their homes. The remaining 10 m^2 of the 20 m^2 requirement per unit shall be used to develop adequate play spaces for children of mixed age groups. These areas shall be no less than 600 m^2 and shall be provided for every 60 units.

   In addition to the above requirement, a community play area must be established for communities with more than 40 families. Subsequent to the provision of the first community play area in a development, a community play area shall be provided for every 120 units. The community play area shall be calculated on the basis of at least 15 m^2 per unit. Each such play area shall be not less than 1200 m^2 in size.

2 & 3. National standards of the Bygnings reglement.

4. Uniformly applied

5. Apply to all new and existing developments of 8 families or more.

17. Playgrounds and landscaped gardens are very prevalant in housing development across Denmark.

The planning and development of all these play areas must include planting, landscape variety, equipment, fencing, accessibility, traffic movements and climatic variables.

Open Space Requirement for Play Opportunities

Space allocation for children's play opportunities based on requirement A and B.

A. for 8 units or more - 20 m^2/unit.
B. for 40 units or more - 35 m^2/unit.

1. Total space for children's play 35 m^2 x (no. of units)
   Play space for Preschoolers 10 m^2 x (no. of units)
   Play space for mixed ages 10 m^2 x (no. of units)
   Community play space 15 m^2 x (no. of units)

2. For every 30 units, not less than 200 m^2 must be provided for play spaces for preschoolers.

3. For every 60 units, not less than 600 m^2 must be provided for play opportunities for children of mixed ages.

4. For every 120 units, not less than 1200 m^2 must be provided for a community play area.

5. In a 120 units development you must have:

   A. Four (4) play spaces for preschoolers, each not less than 200 m^2 in size.

   B. Two (2) play spaces for children of mixed ages, each not less than 600 m^2 in size.

   C. One (1) community play area, at least 1200 m^2 in size.

6. The total open space specifically provided for the play and leisure use of children in a 120 units development is 3200 m^2.

   A. 4 x 200 m^2 800 m^2
   B. 2 x 600 m^2 1200 m^2
   C. 1 x 1200 m^2 1200 m^2

Calculations based on:

1. 20 m^2/unit for developments with fewer than 40 units.

2. 35 m^2/unit for developments with 40 units or more.

NO. OF UNITS	TOTAL SPACE	ALLOCATION OF SPACE
20	400 m^2	A. 200 m^2 B. 200 m^2 C. N/A
40	1400 m^2	A. 400 m^2 B. 400 m^2 C. 600 m^2
120	4200 m^2	A. 1200 m^2 B. 1200 m^2 C. 1800 m^2
240	8400 m^2	A. 2400 m^2 B. 2400 m^2 C. 1800 m^2

A. Preschoolers
B. Mixed Ages
C. Community

ENGLAND

N.B. One response

1. a) Yes standards
   b) Yes guidelines
   c) Circular 79/72 "Children's Play Space" Department of the Environment
   d) Established in 1972

2. These standards and guidelines are national.

3. They are under the jurisdication of the Department of the Environment. The standards are mandatory if subsidy is claimed for the provision of play space in public sector housing schemes. The standards are not enforceable for private sector housing except when they are adopted by local planning authorities for the purpose of development control.

4. A small (unpublished) internal survey showed that approximately 15% of the public housing developments construct play spaces to and often above the standard and another 15% to a lower standard. 5% of housing schemes had play spaces below standard but they were unsubsidized. There is no information on the degree of uniformity at the present time.

5. Requirements are for public housing only; advisory standard may be applied by developers to private housing.

6. Loan sanction aid is given by the Dept. of the Environment, for public sector housing. No incentives exist for private developers.

7. No, only public sector

8. e) On all schemes containing 10 or more child bed spaces, play spaces must be provided on the basis of 3 m^2 per child bed space. Child bed space is defined as all bed spaces in family dwellings except for 2 person dwellings.

9. a) the amenity area for the development.

10. No

11. a) See no. 8
    b) No requirement for indoor play space.

12. No

13. All playground equipment must conform to the latest British Standard. BS5696 1979.

14. b) Short distance by (certain number of meters not specified). Suggested that play space be located away from housing designed for elderly.

15. Circa 24% of the communal land is set aside for children's play use in the typical housing scheme. (40 dwellings/hectare circa 74.4 m^2 floor space per dwelling).

16. N/A

17. No

18. Local guidance is also given by Country and District Councils

19. Local authorities, new town and housing associations are responsible for building public sector housing. The Department of the Environment must give loan sanction and subsidy approval for each new housing scheme and expect certain minimum standards to be met before such approvals are given.

20. See 19

22. No

Unfortunately it is not possible to complete this question as provision is not subdivided by age groups.

EGYPT

N.B. One response

1. a) no standards
   b) no guidelines

Egypt is suffering from an acute housing crisis which is due to the rapid rate in increase (one infant born every 25 seconds) and immigration from rural to urban areas, especially to Cairo (44% of population is urban), reflected in high population density, (23,737-person/Km^2, 1976 census) low housing of a substan tial fraction of poor inhabitants, the lack of appropriate planning, the inadequacy of services, water and air pollution, as well as the generally unhygienic and poor living conditions. If we add the big family size which is the case in rural as well as in urban areas (average size of the household 5.2 persons, we could imagine the poor housing conditions of a fair percentage of the population: 45.7% of households live in dwellings lit by electricity (72% urban versus 18.6% rural) 35.9% of the total households are provided with a purified drinking water tap within the dwelling (30.2%) or within the building (4.9%).

All these deprivations going along with over crowding affect seriously the socialization of children and could lead to friction and to emotional or behavioral problems. The overcrowding of the dwelling makes the internal arrangement and the space use difficult and the multifunction of each room an obligation.

In this atmosphere children are deprived of any private internal space, there are no places assigned to children neither for their sleeping nor for their studying. They sleep and study anywhere and are sent into the street to play. Children are also congested in their neighbourhood where they don't find available place to play because of the narrowness of streets.

FINLAND

N.B. Two responses

1. a) Yes standards
   b) Yes guidelines
   c) Byggnadsforordningen - Ministry of Interior
   d) Established initially through enabling legislation of 1959, revised 1973, with play space requirements specifically stated in 1974.

2. The standards for play spaces are national and apply therefore to the whole country. The guidelines are also national in scope. Some communities have specific requirements for play grounds but such requirements apply only to specific areas.

3. The Ministry of Interior and Town planning departments at the municipal level.

4. The requirements are established for the whole country whether they are appropriately implemented is unknown.

5. Requirements apply to all family housing developments.

6. Incentives are provided in that if the plan does not conform to the requirements the loan application can be denied.

7. Yes
   The requirements apply to all housing except old and rehabilitation.

   A plot playground should be constructed when even there is more than one apartment on the plot.

8. Play spaces are calculated by the number of m^2 per unit - at least 10 m^2/100 m^2 living space.

9. The play space is allocated from the amenity area of the development and from the private area. (a) & (b) below.

10. a) Play spaces for preschoolers between 200-300 m^2 one for each 3,000 m^2 residential floor area.
    b) School age play space of 1500-2000 m^2 include some space for preschoolers in the neighbourhood park.
    c) 6000-12000 m^2 for neighbourhood play space.

11. a) Total space requirement is 10 m^2/100 m^2 residential floor area in units of 200-300 m^2 (only plot playgrounds bound by legislation)
b) Play space distribution:
- plot playground in sunlight for at least 5 hours between 9 and 5 o'clock

Max, 50 m from front door, surrounded by vegetation neighbourhood park: max 150 m from the front door, attached to a "park" area of at least 1550-2500 m^2

12. No provision of indoor spaces.
Guidelines for neighbourhood parks include recommendations for indoor spaces.

13. No response

14. a) next to private yard and b) short distance by certain number of meters.

15. No.

16. a) climbing, jumping, running
b) social play activities occur mostly in the largest parks with playleaders.
c) sand is everywhere, water primarily in the largest parks, equipment consists primarily of sand, climbing, swings, a slide, some benches.

17. Children play in playgrounds, on the streets (in the densely built up areas), parking lots, (especially in areas built during the 60's), areas between constructed and maintained areas (everywhere).

18. Too much stress is laid on ready made play equipment. The notion of loose parts and adventure type play grounds as found in Denmark is little known and rarely practiced in Finland.

19. The Ministry of Interior goes through and signs every town plan for cities and towns. In smaller communities the provincial government reviews the building plans.

22. 20 units - total 200 m^2
40 units apartment - 906 m^2
120 units - 1814 M^2

FRANCE

N.B. One response

1. a) No standard.
   b) Yes guidelines.
   c) Circular No. 67-19, 30 March 1967. Aménagement d'espaces verts et d'aire de jeux dans les groupes d'HLM.
   "Planning play spaces and play grounds in moderate priced housing developments."
   d) 13 m^2/unit to respond to the needs of the groups identified in the circular 1967.

3. These are recommendations which are hardly applied. They are not obligatory.

4. Hardly applied.

5. H.L.M.

6. No, no financial incentives.

7. Each architect does what he wants to do or what he can do, depending upon his interest in children's play.

   N.B. The remaining questions are all negative as it pertains to the situation in France.

GREECE

N.B. Two responses

1. a) No standards
   b) No guidelines

   The kind of problems facing residents of Greece is poor apartment design with space for show rather than for living, inadequate building regulations and supervision, giving minimum of safety, and a lack of space inside and out. No provision is made for mothers of young children who have to manipulate push carts and children up and down stairs and around every kind of obstacle on pavements, such as rubbish, steps, potholes, motor cycles and cars. Inadequate or no play areas within a walkable distance, poorly planned or inaccessible parks, often with attractions that offer nothing constructive to the child, and very limited athletic facilities all create a restrictive environment for children.

HOLLAND

N.B. Two responses

1. a) No standards
   b) Yes guidelines
   c) Attached
   d) established in different years

2. Guidelines are worked on at all levels of government National, regional and municipal.

3. Plans for housing developments are reviewed and assessed by the Ministry of Volkshuisvesting en Ruintelyke Ordening.

4. The guidelines are not applied uniformly across the country.

5. They apply to all family housing but are not enforced.

6. No financial incentives are provided.

7. Not low single detached or old.

8. c) by the number of square meters per unit
   d) by the number of square meters per child

9. a) the amenity area for the development.

10. Preschoolers - 1-6 years old, depends upon the number of units (1000 m^2 for 100 units)

    School age - 6-13 years old play space at least 400 m^2

    It appears that the National guidelines recommend a total of 17.5 m^2 to 27 m^2 per resident. The actual per resident recommendation is tied to the density. In fact there is great debate in Holland as to the guidelines. The efforts of one group of professionals are geared to performance level criteria while professionals of another orientation are committed to space allocation based upon some of the above considerations.

    In large communities:

Fenced in playgrounds	200 - 400 m^2
Beach or forest areas	1000 m^2
Neighbourhood park	500 - 2000 m^2

11. See enclosures/as above.

12. No indoor spaces

13. Enclosures - variety

14. a), b) and c)

15. no

16. All types of activities

17. Parks, school yards, streets, towns, corners, etc., are used for play

18. No response

19. No response

20. Plans for housing developments are made by the municipal government. The plans are tested by the provincial and the national government. In some case money is provided by the national government.

HONG KONG

N.B. Two responses

1. a) No standards for play spaces within the residential development.
   b) Yes guidelines
   c) attached
   d) 1971

2. Apply to Hong Kong

3. Housing Authority of Hong Kong Government in their vast plan of housing estates might consider to leave some open space or they build a playground, standards are never known to public, while the density and the future development of the district might become the guidelines for the Town Planners. For private developers, only in high class housing would they consider to have private play spaces, middle and low class families cannot afford to pay for high cost of play space for their children.

4. Guidelines are not uniformly applied in Hong Kong.

5. Guidelines do not apply to all housing developments.

6. Financial incentives are provided by the government for public housing estates. In private developments the costs are included in the sale price.

7. They apply to all housing.

8. c) by the number of square meters per unit
   d) by the number of square meters per child
   f) persons per hectare

9. Wherever space is available

10. a) depends on density
    b) depends on number of students in school
    c) depends on density of area

11. N/A

12. Not known

13. No equipment is recommended or required, various departments however compile their own lists of suitable play equipment.

14. a) next to private yard and not really relevant

15. No

16. No response

17. The play spaces are rest gardens, children's play grounds, tennis courts, football and basket ball fields. Sometimes even pedestrian paths, corridors, parking areas, deserted fields and streets are used for play.

    On the whole, the kinds of spaces that are used for play spaces are areas which are simply extraneous to housing blocks. The great scarcity of land which exists results in very tight housing layouts with little room to permit the architect to consciously design a "play area".

18. Little research and scant resources are given to providing play spaces for children. The effectiveness of various types of play areas is not monitored, their number restricted by scarcity of land and their attractiveness by lack of money.

    The play spaces provided for children in Hong Kong is little. Land is used for residential, business and industrial development. Housing is always a big problem. Our children cannot play in their house because they are small and crowded. They have to go quite a distance to get to a play ground. Sometimes they have to create their play space, for example: street corners where accidents often happen.

NOTE: Hong Kong has developed standards which focus on the open spaces within the urban area. These requirements are more directly related to Municipal open space allotment than to the allocation of play spaces within residential housing developments.

ISRAEL

N.B. Two responses

1. a) no - they are called standards and are quantitative, but they are not legally binding.
   b) yes - guidelines
   c) (as part of public open space) Play grounds for children integrated with a small garden - 2 m^2/ person. Optimal size (5 dunam) 5000 m^2 for population of 2500.
   d) Established 1975.

2. These guidelines are national.

3. The Ministry of Housing and the Ministy of the Interior have jurisdiction of these guidelines. Plans for public housing developments are not approved if they do not conform to these standards, unless other factors intervene.

   N.B. There is no way to enforce them for private developments unless the local authorities require it. (About 2/3 of housing is publicly built).

4. Applied more uniformly in areas such as development towns where most housing is public. Variations may occur as a result of climatic or topographic considerations.

5. No only public ones, see above

6. No financial incentives are provided.

7. The guidelines apply to all public housing.

8. Play space requirements are calculated by 2 m^2 per person.

9. The amenity area of the development usually totals 40% of the area which is appropriated for such purposes which include schools, health services, cultural and sport centres, parks and stores.

10. Play spaces are not designated for specific age groups in these guidelines.

    N.B. New guidelines proposed in 1977 to the Ministry of the Interior do make such distinctions but these have not been accepted as yet.

For neighbourhoods of 7,200 residents three (3) play spaces, each 5000 m^2 in size should be provided.

11. Minimum 2500 m^2
Optimal 5000 m^2

12. No

13. No equipment is recommended in the guidelines.

14. Not specified in present guidelines.

15. Yes, examples given for various size neighbourhoods developments indicate a variation between 10-13% of the public spaces. But this does not include land which is part of the joint property of the condominium (which all buildings are) some of this land may be available for children.

16. Often not provided for, but rather children make use of whatever spaces or features available.

17. If the play spaces are planned, they are usually standard play grounds with concrete surfaces, standard plastic slides, animal forms, sand box, etc. and sometimes seating places. Little shade is provided despite the heat.

18. Play space provisions are on the whole inadequate in Israel.

19. The agency responsible is part of the Ministry of Housing. The person overseeing this aspect who must approve the proposed plans is the same person who set the guidelines. He has jurisdiction over all publicly built housing of the national government which as mentioned previously is the large majority.

20. National has been described. The national ministry controls and centrally standardizes housing developments built in new towns or in new publicly built developments. In the older, stronger municipalities they would have more local control and would be more willing to bargain open space for increased betterment tax or might reduce the standards in order to build more housing.

There are district planning commissions that must approve all municipal plans. There do not seem to be clear policy differences between them.

22. Not applicable. Standards apply to much larger developments.

NEW ZEALAND

N.B. Two responses

1. a) no standards
   b) yes guidelines, but only on a very narrow basis.
   c) planning for Urban Parks and Reserves:
      Housing in the Landscape
      Public Open Space in New Zealand Cities
   d) 1977

2. The guidelines were developed at the national level primarily to stimulate thinking of local authorities and to get them to think more specifically about regional and municipal standards and guidelines in their district planning schemes.

3. They are not enforced.

4. It is left to local authority to decide on application.

5. The requirements of the guidelines could be enforced through Town and Country Planning Act of 1977 within Countries Amendment Act and Municipal Corporations Act, both in 1979. (The latter two relate specifically to residential subdivision.)

6. No financial incentives are provided.

7. No, could be.

8. No, could be put probably too sophisticated for New Zealand development in residential area.

9. The play space is generally allocated from the amenity area. Generally a subdivider or developer is required to set aside 10% of the site for reserve purposes.

10. Not specified.

11. Not recommended.

12. Not specified.

13. Not specified.

14. Not dealt with

15. No

16. Could be any of these.

17. The provision of spaces for play in New Zealand residential development is left very much to the developer, whether that be a private developer or the state, or a local authority. At worst there is no provision other than the local park provided by the local authority. At best, some of the recent residential developments have communal open space which includes general use green space, specific play areas with sand, water and conventional play equipment and a communal building used for general community activities including children's play groups. May also include a small swimming pool.

The local authority parks always include play areas for children mostly with conventional play equipment but more recently quite imaginative play areas have been developed in a few parks and are very much used by the chidren.

Developers tend to feel that the gardens of the houses, plus the local authority parks are sufficient to cater for childrens play. In the steep topography of New Zealand patches of steep, bushed land which are considered to be undevelopable are frequently left in residential areas and incidentally provide imaginative, if not dangerous places for children's play.

19. The main instrument for administering environmental standards is the Town and Country Planning Act 1977. This is administered by the Town and Planning Division within the Ministry of Works and Development. Local Authorities, through their district planning schemes and accompanying planning ordinances, regulate the local standards. The planning schemes are open to public comment and objection before becoming operational. There is an appeal tribunal for hearing cases which cannot be settled at the local level.

Local authorities may make proposals or requirements in their district schemes for the provision of children's play areas in residential developments. Some do. Many local authorities however, require that developers, instead of providing reserve space in the residential development, simply pay a sum of money to the local authority which is then used to provide local parks where the local authority thinks fit.

Generally New Zealand towns are well provided with open space but it is also inequitably distributed, with few small spaces at the local level for children's play.

N.B. Recent trends towards higher density residential developments in the centres of New Zealand cities have emphasized the importance of providing local smaller recreation spaces for children and local authorities are being forced to recognize that new standards are needed.

NORWAY

N.B. One response

1. a) standards, yes
   b) guideines, yes
   c) NIBR Rapport 42
      Barns Interesser, Planleggingen. 1977

   Criteria for play spaces for children in relation to residential development and construction, p. 78.

   i. Nursery schools and day care centres should be centrally located in developments of 1000 or more residents.

   ii. Centrally located playing fields should be developed for residential developments with 600 units or more. The distance to the field should not exceed 400 m. The field should contain 6000 - 7000 m^2, have varied terrain and provide play possibilities for the users which are not possible in smaller play spaces, i.e., adventure play grounds, water play, wading pool, toilets and play huts.

   iii. Ball fields for older children should be provided for every 600 units. They should not be more than 400 m from the units and should be up to 6000 m^2 with grass and asphalt surfaces.

   iv. Neighbourhood play spaces for young children should be provided for every 200 units. They should be no more than 150 m from the residence and be up to 2000 m^2 in size. The spaces should be partially paved, and have a play hut, sand box and a table with benches, and can be located on a residential lot or communal area for several lots of 25 units (apartments) or more.

   v. Sand box play space for preschoolers should be provided for smaller residential developments and at least for every 25 units. It should be up to 100 m^2 with good sun exposure and have sand box, table and benches for children and adults. Places can be set aside on residential lots or as communal amenity areas for several lots with 4 units or more.

d) It varies from municipality to municipality but the enabling criteria and procedure has been available since 1970.

2. The standards for children's play spaces have been developed by the Norwegian institute of urban and regional planning. The standards as stated above are optional for municipalities. The municipalities are enabled by the building code #69.3 to apply the regulation.

3. The municipal building department has jurisdictional authority to apply the requirements. The NIBR develops such regulations, but the municipalities can choose to adopt them and/or modify them.

4. Although 220 of the 450 municipalities in Norway have adopted modified versions of the regulations where the "should" factor of the criteria is applicable. In 50 municipalities the "must" condition has been accepted.

5. The criteria apply to all family housing developments they are primarily enforced in new developments outside the older residential developments. The density factor also has a way of making it more realistic to apply such criteria to medium and high density communities.

6. Financial incentives are provided.

The financing of communal play areas which are located on private property is the responsibility of the developer. The Norwegian State Mortgage Bank, Den Norsk Stats Husbank provides loans to new developments, up to 4,600 NK per family unit for developing the outdoor play area. (circa $1,200 Canadian)

7. All except low density and old developments.

8. a) by the number of apartments.
e) by the number of square meter per unit.
f) also by the distance in meters.

9. No response.

10. a) Preschoolers 1-5 years
1. 100 m^2 per play space
2. One for every 25 apartment units (from 4-25 units)

b) School age 6-13 years
   1. 2000 m^2 per play space
   2. One for every 200 units (from 25-200 units)

c) Neighbourhood
   1. 6-7000 m^2 per play space
   2. One for every 600 units or more

d) 1. 6000 m^2 ball field
   2. 1 per 600 units or more.

11. a) Depends upon the number of residents in the area
    b) No indoor except for communal all user group spaces.

12. No

13. A variety of play spaces.

14. Not specified

15. Only the total communal area for play spaces. Not divided among new and/or older communities.

17. The quality of the play environment varies greatly in Norway. In many instances typical play equipment is used and does little to attract children. Each year however new places developed by the residents and the children are built. There are few adventure play grounds in Norway. The quality is improving for the other play spaces.

22. Units

20	1 preschool play space	100 m^2
	TOTAL	100 m^2
40	1-2 preschool play space	100-200 m^2
	1 school age play space	2,000 m^2
	TOTAL	2,200 m^2
120	4-5 preschool play space	400-500 m^2
	1 school age play space	2,000 m^2
	TOTAL	2,500 m^2
240	9-10 preschool play space	900-1000 m^2
		2,000 m^2
	TOTAL	3,000 m^2

NOTE: Norway is conducting a strong advocacy program of public relations and information on children's environments. This effort is helping to up grade the public and government level of knowledge about the impact of the built environment on children. The NIBR is currently investigating standards and guidelines of other countries to improve current policies in Norway.

PORTUGAL

N.B. One response

1. a) No standards
   b) Yes guidelines
   c) 1.25 m^2/habitant, up to 6.0 m^2/unit

2. The guidelines are municipal and are established as seen fit by the municipalities.

3. The ministry of public works and the municipality are responsible for the application of the guidelines. They are not enforced.

4. In general the recommendations are not applied.

5. The guidelines for children's play spaces are applied according to the developers.

6. There are no financial incentives provided. Recently however the Ministry of Sport has begun to provide assistance to certain projects.

7. No, see number 2

8. c) by the number of square meters per unit
   d) by the number of square meters per child

9. No response

10. Attached form - as summarized in number 22.

11. The guidelines are established in general by the studies conducted during the development of high density urban projects.

12. No

13. Only recommendations for outdoor spaces

14. See question 22

15. No response

16. No response

17. No response

18. No response

19. No response

20. At the national level the (Règlement Général pour l'Edification Urbaine) determines the standards concerning the density and size of a development. The need for equipment for amenity spaces may or may not be developed at the municipal level.

22. a) For area every 50 children 1 play space 150 m from the residence
- to a total area of 175 m^2
- this play area is an area close to the home
- N.B. 2 m^2 of the total 6 m^2/unit is to be used to develop play spaces close to the residence.

In a 20 unit development 40m^2 available for such play

In a 40 unit development 80 m^2 available for such play

In a 120 unit development 240 m^2 available for such play

In a 240 unit development 480 m^2 available for such play.

b) For area every 50 children, one play space at pre-primary and primary schools.
- to a total area of 675 m^2
- N.B.: 2 m of the total 6 m^2/unit is to be used to develop such play spaces.

c) The play areas for mixed groups should be up to 400 m from the residence.

The play space may be attached to a pre-primary school, or a commercial centre.

Two 2 m^2 of the total 6 m^2/unit is to be used to develop such spaces.

Comments: The recommendation for play spaces in the residential environment are calculated based upon a consideration of 6 m^2/unit.

The total size of the play space is set at an area for each of the kinds described above. The frequency of repeat is implied by the criteria that these spaces can service 50 children. Consequently it is conceivable that such spaces be developed in consequence of every 50 children. However, it is difficult to determine if this is the case based upon the document provided. The play areas b) and c) above may include school recreation areas.

Units	Play space size
20	120 m^2 for play space of 3 types, see a), b) and c)
40	240 m^2 for play space of the 3 types
120	720 m^2 for play space of the 3 types
240	1440 m^2 for play space of the 3 types

SPAIN

N.B. One response

1. a) Yes, Royal decree 2159/1978 23 June 1978, Ministère "de Obras Publicas y Urbanismo".
   b) Yes
   c) Royal decree 2159/1978: Articles 25-1, c.d.
   29-1, c.d,e.
   31-1 1º, 2º, 2,3,4,7
   34-c, 3º
   45-c,d
   49-1,2,3
   76-2,a,b.
   93-t.

   and annex 3-a,b,c,d.
   4-a,b.
   10 which shows the proportion of m^2 of land by residential developments.

   d) In 1965 with the law Foncière du Ministère de la Vivienda today known as the Ministère de Obras Publicas y Urbanismo, developed with the Royal decree 2159/1978.

2. The national legislation applies at the municipal level.

3. Ministère de Obras Publicas y Urbanismo through provincial delegations. Provincial authorities and the municipalities.

   They become enforceable after publication in the "Boletin Oficial del Estado". Immediately upon appearance of the requirements.

4. Strict application.

5. Yes, they are now obligatory standards. Before they were only advisory, but there are still numerous examples of play spaces in the residential environment.

6. No financial incentives are provided for residential play space development. Incentives are available for neighbourhood play spaces.

7. Yes, except for low density or old.

8. c) the number of m^2 per unit.

9. a) and b) see annex 10 of Royal decree
c) see annex 7 and 10.3

10. See annex 10

11. The total is the result of the number of units or of the total size of the residential development.

The minimum open amenity space set aside in single family residential developments could decrease to 18 m^2 per unit.

In order to respond to the play and recreation needs of children.

12. Yes

13. Yes

14. No, except for the proportion established in annex 10.

15. No

16. No answer, see 17.

17. No answer

18. Play spaces are planned and equipped to provide for the variety of play needs identified in a, c, d and increasingly for the activities in b.

19. Ministère de "Obras Publicas y Urbanismo"
Département typical ministerial administration.

20. The regions and municipalities follow the requirements established at the national level by the government.

22. No. of units

20		a) 15 + 3 = 18 m^2
		b) 18 m^2 x 20 = 360 m^2
	TOTAL	320 m^2
40		b) 18 m^2 x 40 = 560 m^2
	TOTAL	560 m^2
120		b) 18 m^2 x 120= 2,160 m^2
	TOTAL	2,160 m^2
240		b) 18 m^2 x 240= 4,320 m^2
	TOTAL	4,320 m^2

SPAIN
(Not translated to avoid misinterpretation)

Annexe 7

La dotation des aires de stationnement correspondant aux modules établis aux articles 9, 10, 11 et 12 du présent annexe devront remplir les conditions suivantes:

a) Les aires de stationnement auront une superficie rectangulaire minimum de 2,20 par 4,50 m.

b) La superficie de l'aire de stationnement minimum d'une place y compris la partie proportionnelle aux accès ne sera jamais inférieure à 20 m^2.

c) On réservera au moins un 2% de stationnements prévus dans le Plan Partiel pour les usagers handicapés. Ces places auront une superficie de 3,30 par 4,50 m.

Annexe 10

10.1 Les modules minima de réserve pour les dotations des plans partiaux que développeront les terrains résidentiels seront ceux qui figurent dans le tableau annexe 10.

10.2 Le module minimum de réserve pour les systèmes des espaces libres de domaine et utilisation publique correspondant aux typologies de logement unifamilial pourra diminuer jusqu'à 18 m^2 par logement quelque soit l'unité considérée, sans la nécessité d'effectuer de différenciation de zones, si la superficie diminuée est remplacée par l'ensemble des espaces libres des jardins de caractère privé.

10.3 La superficie du système des espaces libres d'utilisation publique ne pourra en aucun cas être inférieur au 10% du total de la superficie.

Annexe 11

Le module minimum de réserve sera d'une place par 100 m^2 construits.

SWEDEN

N.B. One response

1. Yes standards
   Yes guidelines

2. National

3. The national board for physical planning and building has jurisdiction of the standards. They are used as a tool during the scrutinizing process undertaken by the regional governmental bodies. This ensures the level of enforcement.

4. Generally used as a starting point for discussions on standard levels in local planning.

5. Yes, the requirements apply to all family developments.

6. Yes, Financial incentives are provided by low cost governmental housing loans. (The national board of physical planning and building in collaboration with the national board of housing.)

7. Yes, all types of housing

8. Space calculated on m^2 per unit. 27 m^2/unit

9. See guidelines - not sent

10. a) preschoolers (1-5 years)

    1. size 200 m^2 per play space
    2. 1 play space/30 households
    3. the play space should be situated within 50 meters from the entrance to the house

    b) school age or mixed age groups (6-13 years)

    1. 1,500 - 2,000 m^2 per play space
    2. 1 play space/150 households
    3. This play space should be situated within 50 meters from the entrance to the house.

    c) Neighbourhood

    1. 3,000 m^2 at least per play space
    2. The recommendations as to the number per neighbourhood is not clear the distance is more important, within 300 meters.

Section 81 Swedish Building Code SBN

11. a) 100 m^2 usable open space within 50 m of entrances corresponding to 100 m^2 GFA (gross floor area)

12. No

13. No response

14. No response

15. No response

16. No response

17. No response

18. Children don't like play equipment more than for a short time. Therefore we try to save nature with big trees close to the buildings to make the outdoor-area both beautiful and suitable for multi-purpose use.

NOTE: The Swedish Norms building "Svensk Byggernorm" 1975, implemented in 1976, state that children must have equal play opportunities regardless of the density of the residential milieu. In fact, in areas of multi-family housing, the builder is required to provide a variety of spaces for children to play in, including spaces for young children close to the houses. In single detached housing, municipal authorities and the builder may establish a contract which requires the homeowners to form a cooperative association to manage and maintain a communal play area for young children. In addition to these play spaces close to the houses, there are requirements for municipally built and operated park playgrounds (park lekplatser) which are not governed by the above-mentioned regulation. These general notes reflect in part some of the attention given to planning for children's play in Sweden.

SWITZERLAND

N.B. One letter response

The federalist structure of Switzerland creates great variety between communities. And the pro Juventute was not able to complete the questionnaire. The materials included in their correspondence did not specify the existence of standards or guidelines.

THAILAND

N.B. One response

1. a) No standards
   b) Yes guidelines for open spaces established 1972

2. The National Housing Authority applies these recommendations at the national, regional and municipal level.

3. The National Housing Authority of the Ministry of Interior has jurisdiction.

4. These guidelines are applied to governmental housing projects, low income residential projects and also to some of the middle-income housing projects which need government support.

5. The guidelines do not apply to all family housing developments.

6. Yes, financial incentives are in some cases provided to the projects by NHA, the Bangkok Metropolis and the Housing Welfare Bank.

7. Yes, no apparent exceptions

8. c) by the number of square meters per unit.

9. a) the amenity area for the development

10. No

11. Outdoor space only.

12. No

13.
1. Horizontal ladder
2. Travelling rings
3. Merry Go Round
4. Giant Slide
5. Climbing Apparatus
6. Horizontal Bar
7. Slides
8. Swings
9. See Saws

14. Short distance by certain number of meters

15. Yes
Road Sidewalk, Playground and Open Space. 17-22% of total land use.

16. Varies.

17. It is very difficult to describe the kinds of spaces that are used for play in the residential communities. However some housing projects provide the open space for adults to swim and relax and spaces for children to climb, jump and run.

18. a) In a big city like Bangkok, provision of open space for children usually receives low priority from decision makers.

b) Existing number of play space for children in Bangkok and other big city needs to improve in size, quality, quantity and location.

c) Housing standards, some laws and regulations related to open space must be prepared and enforced.

22. c) 203 Park/Open Space

Space: 10 m^2/family
1.8 m^2/person

Location: The distance from the housing is to be no longer than 1000 m or one (1) hour travelling.

Children's Play Area: Minimum 160 m^2
800 m from housing

NOTE: At present, only 0.09% of the total urban area if public open space used for recreational purpose. The figures represent the average area of 1 km^2 for 4,000,000 persons which is very far from the standard of 1 km^2 for 70,000 persons planned by the BMA, Bangkok Metropolitan Association.

USSR

N.B. One verbal response

1. a) Yes standards
   b) Yes guidelines
   c) 4 m^2/unit (see Appendix D)

2. National - the same criteria is uniformly applied across the nation.

3. Central Scientific Research and Design Institute.

4. Very uniformly, with consideration given to climatic variables.

5. Yes

6. State builds the houses.

7. Yes most housing is medium to high density.

8. f) by the hectare per 1000 habitants

9. Not known

10. a) 300 m^2/1000 habitants 0.03 hectare
    b) 400 m^2/1000 habitants 0.04 hectare
    c) 1200 m^2/1000 habitants 0.12 hectare

11. a) not known
    b) Indoor spaces for kindergartens and preschool facilities.

12. No

13. Not specified

14. Not known

15. No

16. Not known

17. No

19. The system of norms and rules is one of the main results of scientific investigations. Applied architectural and construction science by its nature is anthropocentrical, it uses widely the results of other sciences and requires, for solving many tasks,

organization of interdisciplinary groups of scientists, sociologists, hygienists, pedagogists and others. The means for solving the such tasks in the USSR is state planning of scientific investigations in the field of civil housing construction and architecture. The main form of planning is five years coordinational plans, which are the part of five years of social and economical development of the USSR. The management of planning and the control for the fulfilment of the plans in the mentioned field are realized by the state Committee of civil construction and architectural under Gostroy USSR. The investigations are made by the complex scientific research and design institutes in charge of this Committee with the participation of the organizations which are under the other ministries.

The head institute in the field of investigation and design for chidren, juveniles and youth is Central Scientific Research and Design Institute of standard and experimental design of schools, pre-schools institutions, secondary and high educational institutions.

20. Not known

22. Not available

WEST GERMANY

N.B. One response

1. a) Yes standards
   b) Yes guidelines
   d) "Golden Plan" 1960 (1967-1975) boarding acts 1965-1978, playground acts since 1973. DIN 18034 from 1971; municipal act since ca. 1970 DIN 18011.

2. The standards are in existance at the national, state and municipal level.

   a) National (federal responsibility)

      Recommendations only

      1. Golden plan of the German Olympic Association (1968, revised in 1967 and 1975)
      2. DIN 18034 (from 1971) (playgrounds)
      3. DIN 18011 (bedrooms for children, interior spaces)

   b) State (partly autonomous members of the federal republic 11 states)

      Standards

      1. building acts of all states, 10 states (playground for children)
      2. 5 states have special "playground acts. Those acts refer to norm DIN 18034 (has to be applied).
      3. guidelines for public housing, which refer to DIN 18011.

   c) Municipal - big towns - (not all) have their own playground acts ("Satzungern") with detailed planning standards, within the framework of the building acts of the states.

3. The jurisdictional responsibilities differ:

Federal/national	no jurisdiction (just research)
States	Ministry of interior affairs or social affairs
Municipal	Department for youth and welfare (public playgrounds) and building supervisory boards responsible for implementation of building acts and housing apartments.

Enforcement: Only possible against private owners, who need a building permit. They are bound by the building act to build a playground for rural children. If the building has two or more dwellings and to apply DIN 18034. The realisation is controlled by the municipal supervisory boards. But, the act is nearly not here applied, enforced against owners of old housing. In public housing the application of all standards is very strictly controlled.

4. The state building acts or playground acts are very similar. But the municipal acts are very different. The application of the state and municipal legislation is also very different. There are a lot of exemptions possible and the local authorities have some freedom of interpretation. If an owner says, there are no small children he can oftenly discharge his obligation to build a playground by money.

5. Requirements for all family housing.

   DIN 18011 (interior spaces) only for public housing enforced a part of the building permit.

6. No financial incentives are provided.

7. The requirements do not apply to one and two family homes, a) c) and e)

8. Interior spaces well defined
   1.20 x 1.80 m play space per bedroom for one - two children

9. a) the public play grounds
   b) applies to play grounds

10. a) Preschoolers (1-5 years)

    1. size 40-150 m^2 per play space
    2. 0.75 m^2 per inhabitant determines the space allotment
    3. unknown

    b) School age or mixed age groups (5-13 years)

    1. 450-800 m^2 per play space
    2. Same measure of 0.75 m^2 per inhabitant
    3. Unknown

c) Neighbourhood
1. 600 m^2 per play space

11. There are differences in the requirements between different states.

	m^2/apartment	m^2/child	m^2/resident
Hamburg	5,0	3,9	1,5
Baden Wurttemberg	3,0	2,3	0,9
Hamburg (allg. Wohnungsban)	3,0	2,3	0,9

12. No

13. See DIN 18034 great variety.

14. a) Next to private yard. No regulations. Generally: In rental housing there are no private outdoor living areas. The owner occupied housing (one family homes) play grounds and private yards are oftenly very near, which produces a lot of problem.

15. No

16. No response

17. In Urban environments (inner city) great lack of playgrounds. Quality of planned playgrounds is bad, so they are poorly used. More used are street areas, unplanned "wild" spaces, parks, etc..., if near enough to dwellings.

In urban fringe areas and suburban areas (low rise developments) situation is good - partly planned and many unplanned play spaces available.

In typical new residential developments (high rise) the amount of green spaces and planned play grounds for small children and school age children is satisfactory, but there is a great lack of arrangement for youth.

In rural areas unplanned play spaces are prevalent. Planned play spaces are rare.

18. No response

19. 1. Establishment of standards/guidelines: These are developed through the findings of research reports. The reports influence the committees like "German Committee of norms" and "German Olympic Association" to revise their guidelines which often get jurisdictional force since the building or playground acts or the building regulations for public housing do refer to them. Especially the municipal standards do refer to DIN and "Golden Plan".

2. Agency responsible for application of standards/ guidelines: here the local level is most important. Responsibilities are the local authorities for youth and sports or youth and social affairs. They develop in cooperation with the planning and building authorities, local plans for play space supply and are responsible for the maintenance of the playgrounds. The relation to the state level is established by the local need to get subsidies for building play spaces and eventually paying the state for care and supervision of children in play spaces, or adventure playgrounds. The state agency is located within the administration of social affairs. Its task is to check the application for subsidies. In this way the state controls the consideration and application of the state standards but if there are no standards (no playground acts) they have nothing to control.

20. Federal legislation sets the framework for the state and especially municipal planning in the field of urban development, building regulation, urban renewal and rehabilitation and new housing. Federal and states together create financial programs to give local authorities and private owners money to foster building, planning, renewal etc. in a special way. Further federal authorities and legislation determines the structure of public housing and finance research on housing developments.

The States are responsible for the conduction of the federal legislation and the distribution of subsidies to communities and private households. They decide how to conduct and distribute and often have own additional programs, i.e. in the field of renewal. They are responsible for legislation as to how a private landowner may build (building acts) and for play spaces acts.

The communities have the choice to decide whether to apply the planning instruments given by federal and state legislation and how to apply, where to apply, but because of their financial dependency their scope for planning policies is generally small. In the field of play spaces their responsibility is greater because there is no federal act and often only a very open state standard which must be determined and formed out.

22. Impossible to fill out.

NOTE: References:

Schottmayer/Christman: Kinderspielplatze, Stuttgart 1977

Niermann: Der Kinderspielplatz, ein Handbuch, Koln 1976

Stadtebanininstitut Nurnberg: Kinderspielplatze, Stuttgart 1974

Bodeker et al.: Offentidre Spielplatze in Stadten und Gameinden, Dostmand 1976.

YUGOSLAVIA

N.B. Two responses

1. a) No standards
   b) Yes guidelines
   d) guidelines established in 1973

2. The guidelines are established at the National level.

3. The Zveza prijateljev mladine Slovenije Urbasistichi institut Slovenije has jurisdication of the guidelines.

4. They are applied by settlement planning.

5. The guidelines are recommended for all family housing development. Each family housing development plan is to be presented to people of a determined community.

6. Financial incentives are provided for play spaces in that it is included in the price of the apartment or individual contributions of people who live in the town or community.

7. Recommendations apply to all housing types.

8. The play-space requirements are determined by the number of square meters per child (d)

9. No response

10. a) Preschoolers (1-5 years)

    1. size 100-200 m^2 per play space
    2. the number of such spaces depends upon the size of the development.
    3. 10-50 children should be accommodated in this space.

    b) School age or mixed age groups (6-13 years)

    1. size 1000-3000 m^2 per play space
    2. the number of such spaces depends upon the size of the development.
    3. this play space should accommodate 10-200 children.

c) Neighbourhood (family, adolescent and school age children's use)

1. size 2000-6000 m^2 per play space
2. one space of this type is recommended per development
3. this play space can accommodate up to 3000 children.

11. a) The play space size is determined by the minimum of 4 m^2 per child.
b) Indoor spaces are at the moment mostly in kindergartens and schools (Kindergarten total 5-7 m^2 per child).

12. No.

13. Recommended equipment. Sand pit, benches and seats, grass bushes, trees, dust-bin, climbing facilities.

14. a) next to the private yard.

15. Yes, it depends on the number of children.

16. a) physical and
b) sand, water

17. Preschool play ground
Kindergarten play ground
Neighbourhood play ground

18. There are many kindergartens in Yugoslavia: The play ground of the kindergartens are also open to use by children not attending the kindergarten.

19. Since these are only guidelines, they should not be treated as standards. There is currently work in progress to develop standards which will make the criteria obligatory.

20. There are no differences between the jurisdictional responsibilities of the federal or national, regional or provincial and municipal planning policies.

22. No. of units	Allocation of space	
20	c) mixed use	200-500 m^2
	total space	cca 500 m^2
40	a) preschooler	100 m^2
	b) school age	1,000 m^2
	c) mixed use	1,000 m^2
	total space	cca 1,000-2,000 m^2
120	a) preschooler	300 m^2
	b) school age	2,000 m^2
	c) mixed use	3,000 m^2
	total space	cca 3,000-5,000 m^2
240	a) preschooler	400 m^2
	b) school age	3,000 m^2
	c) mixed use	3,000 m^2
	total space	cca 4,000-7,000 m^2

APPENDIX B

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Case postale 1250, succursale «B»
Hull, Québec
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Téléphone: (819) 770-3360

June 22, 1979

Dear IPA member,

During the 7th World Congress of the IPA in Ottawa, August 1978, the International Year of the Child working group of the IPA membership established priority projects to be undertaken during 1979. The Canadian IPA membership proposed to undertake an international comparative study of play space allocation for children in residential developments. This group has directed me to conduct the study on their behalf. I am writing to you at this time to solicit assistance in collecting the necessary information relative to legislation, regulations or guidelines for children's play spaces in your country.

Your attention to completing the attached questionnaire and to furnishing examples of existing documents is most appreciated. I am looking forward to a September 1, 1979 deadline for collecting all pertinent data so as to have final report completed by December 31, 1979.

The attached letter is intended to introduce the project to others whom you may ask to fill out the questionnaire.

Thank you for your attention.

Dr. Steen B. Esbensen
Professor

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June 22, 1979

Dear respondent,

I have been engaged by the working group "Children and their surroundings: Play and recreation" of the International Non-Governmental Organizations' International Year of the Child Committee to undertake an international study.

The International Playground Association as lead organization of this committee has provided the human resources and contacts to assist me with the study: "An International inventory and comparative study of existing legislation and guidelines for children's play spaces in the residential environment".

On behalf of the above organizations I would appreciate your assistance in gathering the necessary data to complete this project. A questionnaire is included, and your thorough attention will be most helpful in assuring that we can develop a report which presents the state of the art with respect to how play spaces for children are legislatively allocated in residential housing developments throughout the world.

Thank you very much for your contribution to the project.

Sincerely,

Dr. Steen B. Esbensen
Professor

N.B. Please reply by Sept. 15, 1979.

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INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF EXISTING LEGISLATION AND GUIDELINES FOR CHILDREN'S PLAY SPACES IN THE RESIDENTIAL ENVIRONMENT.

Purpose and limitation of the study:

It is the intent of this study to focus primarily on land allocation and play space development for children within a residential housing development.

Play spaces are defined as strategically located areas provided to accommodate within easy access to the dwelling unit the play needs of children of different age groups.

While we recognize that Parks and Recreation Departments of Regional and Municipal Governments may set aside land as play parks for children, we are limiting our study to the legislation governing housing related play spaces. Spaces in fact that the developer-builder must set aside and develop within the site.

Your attention to this distinction is most important.

N.B. Please reply by Sept. 1, 1979.

INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF EXISTING LEGISLATION AND GUIDELINES FOR CHILDREN'S PLAY SPACES IN THE RESIDENTIAL ENVIRONMENT.

Country: _____ Date: _____

Name: _____ Address: _____

Professional interest: _____

1. a) Are there standards governing play space allocation and development within residential housing developments in your country. YES ___ NO___

   b) Are there guidelines or recommendations for play space allocation and development within housing developments in your country. YES ___ NO ___

   c) If so, please quote the standard or guideline. (or attach copy).

   d) What year were the standards or guidelines established?

   _____

2. Are these standards or guidelines national, regional or municipal? (Please circle and specify)

3. What bureau or department has jurisdiction of these standards or guidelines?

How are they enforced?

4. How uniformly (across your country) are these standards or guidelines applied?

5. Are the requirements for all family housing developments?

YES ___ NO ___

If so how are they enforced?

6. Are financial incentives provided? YES ___ NO ___

   If so, by whom, what agency?

7. Do these requirements apply to all housing? YES __ NO __

   (Please check all applicable categories and explain)

Densities		Housing Types		Age	
High	_____	High rise	_____	Old	_____
Medium	_____	Row Housing	_____	New	_____
Low	_____	Single detached	____	Rehabilitation	___

8. How are play space requirements determined? (Please circle one and state the requirement).

   a) By the number of square meters per bedroom?

   b) By the number of square meters per bedroom excluding master bedroom?

   c) By the number of square meters per unit?

   d) By the number of square meters per child?

   e) By the number of square meters per child space? If so how is child space defined with respect to bedroom.

9. The play space area is allocated from what other space requirement in the development? (Please specify if possible).

   a) The amenity area for the development.

   b) The private area of the unit

   c) The parking area of the development.

10. Are play spaces designated for different age groups? (Please specify how they are allocated).

   a) Preschoolers (1-5 years)

      1. size _____m^2 per play space
      2. how many such spaces per development _____
      3. how many children should use this space.

   b) School age or mixed age groups (6-13 years)

      1. size _____m^2 per play space
      2. how many such spaces per development _____
      3. how many children should use this space.

   c) Neighbourhood (family, adolescent and school age children's use)

      1. size _____m^2 per play space
      2. how many such spaces per development _____
      3. how many children should use this space.

11. a) What is the total size of the play space required or recommended by the legislation?

    b) How is it distributed with respect to indoor and outdoor spaces?

12. Does the play space requirement include provision of indoor spaces?

    YES ___ NO ___

13. What equipment is recommended or required for the play space?

14. How are the private outdoor living areas treated with respect to play space locations? (Please circle and explain).

    a) Next to the private yard

    b) Short distance by certain number of meters

    c) Far away

15. Is it possible to determine the total amount of communal (non private) land that is set aside for children in typical new residential development in your country?

YES ____ NO ____

Is so, what % of the communal land is set aside for children's play use?

16. If you have no quantifiable regulation (standards), how are the play activities of children provided for in your residential developments?

a) Physical play activities; climbing, jumping, running.

b) Social play activities; dramatic play, cooperative games, block building

c) Creative intellectual play activities; sand, water problem solving activities.

d) Quiet emotional play activities - quiet sitting apart, relaxing in nature, gardening, benches for adults and children

17. It is possible to describe the kinds of spaces that are used for play in your residential communities? (Please elaborate).

18. Please feel free to make additional comments on the play space provisions for children in your country.

19. Please explain how the agency responsible for administering the standards or guidelines operates within your country. How does it relate to other levels of government?

20. Please describe the jurisdictional differences between the federal or national, regional or provincial and municipal planning policies as they effect housing developments.

21. Are you interested in receiving a copy of the report when completed?

21. If it is possible for you to take a few more minutes would you please apply the space calculation to the following examples of housing developments.

No. of Units	Allocation of Space	
20	a) Preschooler	_____
	b) School age	_____
	c) Mixed use	_____
	TOTAL SPACE	_____
40	a) Preschooler	_____
	b) School age	_____
	c) Mixed use	_____
	TOTAL SPACE	_____
120	a) Preschooler	_____
	b) School age	_____
	c) Mixed use	_____

No. of Units	Allocation of Space	
240	a) Preschooler	_____
	b) School age	_____
	c) Mixed use	_____
	TOTAL SPACE	_____

Thank you very much for taking the time to be very thorough in completing this questionnaire.

NATIONAL SWEDISH INSTITUTE FOR BUILDING RESEARCH

Play areas related to no. of inhabitants, children or dwellings.

Czechoslovakia, 0.5 m^2 per inhabitant
Hungary 0.4 m^2 per inhabitant, 8 m^2 per child
Italy 2.0 m^2 per inhabitant
Poland 2 m^2 per child
Turkey 0.5 m^2 per inhabitant
USSR. 1.0 m^2 per inhabitant
U.K. 20-25 sq. ft. per inhabitant - 1.9-2.3 m^2 per inhabitant

Requirements of above countries converted to a common unit of measure.

Czechoslovakia, 2 m^2/unit
Hungary 1.6 m^2/unit or 16 m^2/unit
Italy 8 m^2/unit
Poland 4 m^2/unit
Turkey 2 m^2/unit
USSR. 4 m^2/unit
U.K. 8-10 m^2/unit

A report from the National Swedish Institute for Building Research 26/67 Quality of Dwellings and Housing Areas.

DEFINITION OF TERMS

AMENITY AREA

Space outside the dwelling unit but within the boundary of the project intended for the passive enjoyment and active recreational needs of the residents. It may include landscaped areas, hobby rooms, patios, balconies, swimming pools and the like.

APARTMENT BUILDING

A multiple dwelling comprising three or more dwelling units with shared entrances and other essential facilities and services and with shared exit facilities provided for dwelling units located above the first storey.

COMMUNAL AMENITY AREA

An area within the boundary of the project used on a shared basis by the residents for their enjoyment and recreation.

COMMUNITY FACILITIES

Services which complement a residential area such as: community centres, public libraries, parks, playgrounds, schools, hospitals, shopping, medical and dental clinics.

COMPREHENSIVELY PLANNED HOUSING

Housing built by means of a development process in which the location and design of the individual dwelling units is an integral part of the planning and design of the project site, including vehicular and pedestrian circulation systems, services, open spaces, landscaping and so on. This type of development may be applied to a variety of housing types, such as; small lot housing, horizontal row housing, stacked multiple housing, and/or apartment buildings.

CRITERIA

A rule established to assist in the design and development of a particular site.

DUPLEX

A building comprising two dwelling units with individual access.

DWELLING UNIT

A room or suite of rooms operated as a housekeeping unit, used, or intended to be used as a domicile by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.

FAMILY UNIT

Any housing unit containing two or more bedrooms.

GUIDELINE

A statement which recommends certain requirements be applied.

INDIVIDUAL AMENITY AREA

An area within the boundary of the project for the private use by the residents for their enjoyment and recreation.

LIVING ENVIRONMENT

The area to which the child has immediate access and where he/she establishes a sense of belonging.

PLAY SPACES

A variety of spaces both developed and preserved within a residential development, exclusively for the use of children.

PUBLIC OPEN SPACE

Land and facilities which are not in private ownership and are open to use by the public.

REQUIREMENTS

A statement specifying the quantifiable or quality measures necessary to comply with the standards or guidelines.

RESIDENTIAL ENVIRONMENT (DEVELOPMENT)

An area of land, developed with different housing types which provides shelter to families and children ,i.e., a comprehensively planned development.

SEMI DETACHED HOUSE

A building comprising two dwellings side by side sharing one party wall.

SEPARATION SPACE

Open space around dwelling units to ensure an appropriate environmental context for activities undertaken within the dwelling units.

STANDARDS

Mandatory requirements applied through legislation by a particular level of government.

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PROJECTS SUPPORTED BY CMHC AS PART OF THE RESEARCH AND DEVELOPMENT PROGRAM UNDERTAKEN BY THE CHILDREN'S ENVIRONMENTS ADVISORY SERVICE (CEAS) FOR THE INTERNATIONAL YEAR OF THE CHILD

The research reports from the following projects are available through the CEAS Resource Service from CMHC National Office and CMHC Regional Offices.

1. INTERNATIONAL INVENTORY AND COMPARATIVE STUDY OF LEGISLATION OF PLAY SPACES

   This will provide a basis for comparison of CMHC standards and policies with those of other countries, regarding the allocation of space for children in the residential environment and is seen as a resource for municipalities establishing such standards.

2. HOUSING CANADA'S CHILDREN - A DATA BASE

   The compiled statistics will provide a profile of Canadian children and their housing.

3. MAINTENANCE AND RETROFITTING COSTS OF CHILD-RELATED FACILITIES IN THE REAL ESTATE PORTFOLIO

   Life cycle costing of child-related facilities and maintenance costs due to lack of child-related facilities will be used to determine cost effective solutions.

4. EVALUATION OF EXTERIOR FACILITIES FOR CHILDREN IN THREE LOW INCOME PROJECTS

   The report will provide an evaluation of three approaches to play space design in terms of play experiences, use by different age groups, accessibility, and resident satisfaction, using a technique that allows children to respond naturally.

5. CHILD'S PERCEPTION OF THE NEIGHBOURHOOD

   The study will document how children use selected urban neighbourhoods that vary in character and the influence of the design of the neighbourhood on the children's activities.

6. HOUSING NEEDS OF URBAN NATIVE FAMILIES - A COMPARATIVE STUDY OF CHILDREN'S AND PARENTS PERCEPTIONS

   A study of the needs of native children and their parents in the area of housing, neighbourhood and community, on the basis of which housing strategies can be developed to respond to their needs in the urban setting.

7. WORKSHOP: "HOUSING THE FAMILY IN 2001", FOURTH CANADIAN CONFERENCE ON CHILDREN

   The report deals with the changing family structure, the needs of children and the suitability of present forms of neighbourhood design to house the future family.

8. DEVELOPMENT OF UNUSED SPACES IN RESIDENTIAL PROJECTS INTO PLAY SPACES FOR CHILDREN

   The study deals with the identification of waste spaces, and design suggestions to recycle them into play spaces for children.

9. GUIDELINES FOR THE ADAPTATION OF RESIDENTIAL SPACE FOR THE CARE OF PRE-SCHOOL CHILDREN

   The study will utilize existing knowledge of indoor and outdoor environmental requirements of children in order to accommodate the developmental needs of pre-schoolers in conventional family living space.

10. PRAIRIE WINTER PLAY PATTERNS

    The project goal is to provide for children's play during the winter months, and will be conducted in two parts: (a) A study of social and environmental factors influencing children's activities in winter, and (b) A study of climatic, topographical and environmental factors that must be considered in the design of winter play facilities that accommodate physical, social, creative and intellectual play.

11. DESIGN CRITERIA FOR THE DEVELOPMENT OF A SHELTERED PLAY SPACE IN MEDIUM TO HIGH DENSITY FAMILY HOUSING PROJECTS IN THE ATLANTIC REGION

    The report will examine the need for sheltered play facilities in high density family housing projects and recommend design details such as location, size, space allocation, construction materials, and play facilities.

12. USER GENERATED DESIGN FOR SHELTERED SCHOOL AGE RECREATION SPACE IN MEDIUM DENSITY WALK-UPS

    The report will document a procedure that was used to involve school age children and their parents in the design, implementation, maintenance, and management of a sheltered play space, as a possible model for other residential developments.

13. GUIDELINES FOR THE SELECTION OF CONSTRUCTION MATERIALS, CONSTRUCTION METHODS, LANDSCAPE MATERIALS AND VEGETATION USED IN PLAY SPACES

    An inventory of materials, finishes and methods with a description of qualitative characteristics and possible use in a play space in terms of user groups, climatic conditions, availability and maintenance will be produced.

14. PLAY SPACES TO ACCOMMODATE DISABLED CHILDREN

    Design suggestions will be developed for an integrated play space that accommodates both disabled and normal children.

15. CHILDREN'S PLAY SPACES ON ROOF DECKS

The study will result in design suggestions that deal with the technical aspects, such as drainage, containment, and control of the microclimate, as well as the provision of stimulating play opportunities for child users.

16. TRAFFIC HAZARDS TO CHILDREN IN MULTIPLE HOUSING PROJECTS

The study will analyze accident statistics and traffic patterns in selected multiple housing projects and develop design suggestions in terms of traffic separation, lighting, landscaping, barriers, etc., to minimize the conflict between automobiles and children.

17. A CASE STUDY OF A COMMUNITY PARTICIPATION PROCESS FOR IMPROVING A NEIGHBOURHOOD TO BE MORE SUPPORTIVE OF CHILDREN AND YOUTH.

The case study will identify the process of community participation, the mechanisms available, the problems faced, and the resources tapped, and will serve as a model for other communities.

18. ADAPTATION OF CMHC DESIGN GUIDELINE ADVISORY DOCUMENT "PLAY OPPORTUNITIES FOR SCHOOL AGE CHILDREN, 6-14 YEARS", TO MUNICIPAL LEGISLATION

An example or model policy guidline on planning for play for school age children that is applicable to the municipal residential development control approval process and is written in such a way as to be easily adopted by municipalities.

19. MANAGING URBAN SPACE IN THE INTEREST OF CHILDREN

The proceedings of the International Symposium, arranged by "Man and his Biosphere", will be presented. It dealt with the allocation of urban space to respect children's interests and the political, legal and socio-economic conditions required for various forms of organizations to function adequately.

20. INCENTIVES FOR THE PROVISION OF IMPROVED CHILDREN'S FACILITIES IN HOUSING PROJECTS

The position paper will investigate alternatives which can serve as incentives to developers under the National Housing Act, to provide children's facilities within residential developments.

21. MONOGRAPH SERIES

Titles will be announced in the CEAS newsletter.